A Review of IDRC Documentation on the Sustainability of Networks (1995-2005)

For IDRC's Evaluation Unit and the Network Working Group

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Executive Summary

This document review forms part of the first step of a three-phase strategic evaluation of IDRC experience in supporting networks. The review uses IDRC evaluation reports, short-form PCRs, IDRC grey literature and selected outside documents to examine four questions about sustainability for networks. As the documents reviewed serve diverse purposes within the organization, the answers offered in this report are formed by partial, sometimes contradictory, and often only implicit information. The report maintains an implementation-focus, drawing out experiences, ideas, and strategies that IDRC staff might apply to the networks with which they are involved.

Question 1: What does IDRC mean by sustainability of networks?

No document provided a definition of sustainability for networks. In fact, because of the very broad definition of the term "network" used in this review, it would be difficult to offer a single, useful definition. Rather, the documents show that when IDRC discusses sustainability for networks, it refers to four dimensions: time, finances, relationships and processes and structures.

Within the ***dimension of time***, the review found that the lifespan of IDRC-supported networks varies from two years to over two decades. The variation depends partly on the purposes of the network. Capacity building networks tend to have longer time frames. Lifespans of networks that focus on improving research quality or the utilization of research results vary from two or three years, to much longer. The documents also show that IDRC acknowledges that for some networks to be sustainable, they must emerge incrementally.

Regarding ***financial dimensions*** of sustainability, IDRC does not believe a network has to be financially self-sufficient. Documents show that some networks have had some success in revenue generation, but others rely instead on diversifying their funding sources.

Since IDRC's concept of networks begins with them as social arrangements, the Centre emphasizes ***relational dimensions*** of sustainability. However, this emphasis on relationships does not imply that sustainable networks need to have a static membership. Within some networks, sustainability includes a dynamic movement of members through the network.

With respect to ***processes and structural dimensions*** of sustainability, the documents show that IDRC is willing to allow networks to take time to become sustainable even over the priority of producing immediate research results. Sustainable networks demonstrate flexibility in adapting to internal and external change. Moreover, the Centre believes that some formal sustainable networks have benefited from having an independent status or a stable institutional home. Finally, in some cases, IDRC has supported capacity building efforts both for members to participate within networks, as for institutions to house and manage them.

Question 2: When is sustainability a goal for networks, and when isn't it a goal?

According to the documents reviewed, the answer would seem to lie somewhere between "almost always" and "perhaps too often". When individual networks are reviewed in PCRs, Evaluation reports or PI external reviews, explicit or implicit comments suggest that they are supposed to continue at least into another phase of activity and/or IDRC support. The exact anticipated time-frame is not stated. However, IDRC's grey literature on networks repeatedly points out that networks need not exist in perpetuity. The grey literature states that the Centre ought to be clear about how long it intends to remain involved in a network. The contrast between the two sets of literature raises a question of whether there is a gap between theory and practice in IDRC's experience with networks.

The word "sustainability" connotes a certain moral quality in development circles, as it is linked to "sustainable development". However, networks are program delivery mechanisms, not development impacts. Sustainability for networks may be neither important nor appropriate, let alone feasible.

Question 3: What factors contribute to the sustainability of networks?

Five areas of factors emerged in the documents: internal relations, external externals and contextual factors, on-going relevance, financial aspects, and housing a network.

Within **internal relations**, the key factors include the development of shared ownership and mutual trust, the dynamism of connections and interactions among members, and balancing the pros and cons between having "open" or "closed / selective" approaches to membership.

On the question of having individuals or institutions as members, institutions bring strengths that could support a network's sustainability. However, given that it can be more difficult to manage institutional as opposed to individual collaboration within networks, some networks have tried to find some middle ground between institutional and individual memberships.

Rather than insisting on a strict understanding of equality of relations, encouraging a network to define "circles of participation" through which members can choose at which level they'd like to participate, can also make their participation more sustainable.

External relations and contextual factors include a network's perceived credibility by external stakeholders, its ability to engage and communicate with stakeholders and its target audiences, and special considerations that affect sustainability for networks that operate in violent contexts.

For a network to be sustainable, it must continue to be relevant to its members and to its context. This requires a network to be adaptable. Although some authors describe networks as inherently adaptable and flexible, examples in the documents show that some networks had difficulties changing focus, processes or membership. Strategies for developing flexibility include using evaluation processes, having a fairly broad thematic focus, and building structures that allow for flexibility. Moreover, bringing in new members can help a network remain relevant. In order to do so, networks have used small grants programs or new research projects, while others noted that changing people in key positions was a way of bringing new people in. Evidence from the documents suggest that networks which undertake and facilitate collaborative projects are more likely to remain immediate and

relevant to their members, and therefore more sustainable, than networks that only share information.

Financial factors are crucial for network sustainability. The report was unable to attempt a cost-benefit analysis of networks. However, it explores four factors of financial sustainability that emerged in the documents. First, networks benefit from having secure, long-term and flexible donor commitments. Second, networks ought to diversify their donor base beyond a single donor. Third, networks can try to generate some revenue through commercialization of research results, selling services, taking on consultancies, and selling memberships. However, the documents point out a number of problems that have arisen from each of these strategies, and few networks have recouped significant portions of their costs through revenue generation efforts. Finally, networks can minimize their operating costs by avoiding high-level salary and office expectations, enlisting volunteer labour, having members seek out their own funding for network activities, and averaging fixed costs over larger memberships.

The final factor affecting sustainability is that of finding **institutional homes for networks**. IDRC has incubated several networks in its regional offices, or under the coordination of Canadian universities or research institutes. Devolving them to Southern institutions is consistent with empowerment values, and also has implications for sustainability. Devolving a network to a Southern host institution or government office may ensure that it remains relevant to its context, may ensure that its new host contributes financially, and may keep it in closer touch with its members. Incorporating as a legal entity can help networks become more visible, have an easier time securing funding in its own name, and help consolidate a previously scattered set of activities and functions. Some networks try to devolve key activities, products or research agendas to secure institutions as a way of ensuring those priorities are sustained beyond the life of the network.

IDRC's performance as a supporter of networks is mixed. Some of the documents provide examples where the Centre acted as a supportive and patient donor, avoiding undue administrative burdens, and willing to take risks. In one case, a network complained that the Centre's approach to funding only parts of a network risked fragmenting its structure. Some PCRs noted that staff turnover inhibited proper support and follow-up. In terms of finding institutional homes, IDRC has had success in devolving networks to Southern institutions, and helping others gain independent legal status.

Question 4: When a network is planned to have a limited lifespan, what factors facilitate production functioning and satisfactory wrapping up / completion of the network?

The final question asked in this review remains largely unanswered. There was little information in the documents on whether networks function differently if they have a limited lifespan. As well, IDRC has documented very little experience with networks that wrapped up in a formal and constructive way. Rather, some networks that came to an end saw more of a dissolution than a conclusion. Questions about how to work with limited lifespans, and how to help a network come to a completion point remain for the next phases of this network evaluation.

Document Review
on
Network Sustainability

1. Introduction

The International Development Research Centre (IDRC) has been involved with networks since it began. They are an important mechanism for improving research quality and efficiency, increasing reach and impact, supporting capacity development, and influencing policy. The 2003 external reviews of IDRC's nine program initiatives (PI) show that networks are part of each PI's program strategy .

In 2003, a group of IDRC staff people voluntarily came together to form the Network Working Group (NWG). They meet in person and electronically to share learning about working in and supporting networks. The NWG asked the Evaluation Unit to help them deepen their understanding of IDRC's experience with networks, especially with respect to three areas: intended results, governance and coordination, and sustainability. The Evaluation Unit commissioned three document reviews to cover those areas. This is the document review on issues of network sustainability. The next steps in the evaluation process are: a findings session based on the three document reviews, interviews with IDRC staff and network coordinators, a survey of network coordinators and members, and the Centre's 2005 Annual Learning Forum.

This evaluation process builds on a strategic evaluation of IDRC-supported networks in 1995 which culminated in Anne Bernard's paper *IDRC Networks: An Ethnographic Perspective* (1996). Her study forms the conceptual framework for this implementation-focused document review of IDRC's experience of networks from 1995 to the present.

The definition of network used in this study is broad: included are formal or informal social arrangements among individuals and institutions allowing them to interact directly to:

- build relationships, work jointly, enable learning and/or mobilize action;
- engage in exchanges which add value to how they think or what they do;
- raise the profile and use of research results; influence policy communities; build research and policy capacities; or advocate for a new research agenda; and
- maintain their autonomy as participants.

This study does not include information or access networks if they do not contain key aspects of the definition above: social interaction and relationship building in order to achieve shared outcomes.

Network Sustainability

Like most donors, IDRC is under pressure to demonstrate quick results for the resources invested within a two- to three-year funding cycle. However, common wisdom (see, Bernard 1996; Creech and Willard 2001, Church 2003) about networks says that:

- networks are expensive;
- they require a lot of effort to coordinate, especially at the beginning; and
- they may require five to seven years' investment before achieving top productivity.

So how can IDRC help ensure success in the networks it supports? How can it help the networks be sustainable enterprises that will get past the labour- and cost-intensive first years, and into the more productive phases? And how can IDRC help these networks continue to flourish past the end of donor funding?

Outline of the paper

This paper reviews IDRC evaluation documents, grey literature and selected outside sources to address the question of how to promote the sustainability of IDRC-supported networks. Section Two reviews the study's methodology. This paper is necessarily tentative, as it tries to find answers in documents that did not necessarily intend to address the questions posed. This report, therefore, tries to raise issues, note tensions and balances, and suggest directions that future steps in this evaluation process may explore from different sources of information and perspectives.

Sections Three through Six examine the study's four key questions, namely:

Section Three: What does IDRC mean by sustainability of networks? The documents do not provide a clear definition of sustainability for networks that would be helpful for the vast array of networks with which IDRC is involved. Rather, the documents point to several elements of sustainability that will be more or less relevant to particular networks, depending on their nature, purpose, membership and context. The elements have to do with time, finances, relations, processes, and structures.

Section Four: From IDRC's experience, when is sustainability a goal for networks and when isn't it a goal? Why? This section notes that the vast majority of evaluation documents which review specific networks either imply or state explicitly that the network in question is expected to continue beyond the then-current phase of IDRC support. Although IDRC grey literature argues that networks ought to be designed with limited time-fames in mind, at least in terms of donor support, the evaluations do not indicate when the networks expect to wrap-up their activities, and few mention plans for the phase out of donor funding.

Section Five: What factors help or hinder the sustainability of networks? The longest section of this paper deals with factors affecting sustainability. The factors relate to a network's internal relationships, external relationships and contextual factors, on-going relevance, financial sustainability, and institutionalization. This section attempts to give readers options and ideas for dealing with challenges to sustainability that previous IDRC-supported networks have tried.

Section Six: When a network is planned to have a limited lifespan, what factors facilitate productive functioning and satisfactory wrapping-up/completion of the network? The

documents revealed only a negligible amount of information on these topics. IDRC has documented very little experience with networks that wrapped up in a formal and constructive way. Some networks that came to an end saw more of a dissolution than a conclusion. Questions about how to work with limited lifespans, and how to help a network come to a completion point remain for the next phases of this network evaluation.

Finally, Section Seven summarizes the findings and questions emerging from the review.

2. Methodology

This document review summarizes what IDRC has learned about sustainability for networks. Using Anne Bernard's conceptual framework as a starting point, the review builds on the Centre's strategic evaluation of networks in 1995. Since Bernard's study included a literature review, this review includes documents from1995 to the present. The categories of documents include five types:

a. ***Short-form Project Completion Report (PCRs).*** IDRC's Evaluation Unit staff provided 47 short-form PCRs from 2000 to the present. Of these, seven described initiatives that did not meet this study's definition of a network, or envisioned networks which did not did not materialize. The remaining 40 reports referred to 34 different networks.

   Prior PCR data on networks had already been covered by Odilia Maessen's *Project Completion Report Content Analysis Study* (2000). She found that only 15% of the 75 long-form PCRs reviewed provided comments about networks. These commented on the need for improved or more networking among projects, including post-project networking; others suggested mechanisms to improve networking (Maessen 2000:1-54). Therefore, these long-form PCRs were not reviewed in this study.

   Many of the short-form PCRs proved very useful for this study. They explained some of the background story of the networks, the ideas and hopes behind them, and candid critiques about how things went. Written by IDRC staff people very much engaged in the networks they described, PCRs offered some of the most interesting information and ideas for this report.

b. ***Evaluation reports.*** From the 222 evaluation reports that the Evaluation Unit received between 1995 and 2004, 55 are included in this study. These reports either:
   - contained the word "network" or a related term (e.g., "consortium", "forum") in the title; or
   - covered projects that contained the terms "network" or "networking" as descriptors on IDRC's project information database, IDRIS.

   IDRC's evaluations are user-driven. Information users define evaluation terms of reference to meet their needs. As such, their reports focus on different topics. Some evaluations of networks look at the relevance of their research agendas, others focus

[1] ICT-related projects which created a network as described in the introduction to this paper, for instance, MISTICA, and the Telecentre Evaluation Network, are included.
[2] The evaluation reports included are those that the Evaluation Unit received since 1995. Sometimes there is a delay between the evaluation being undertaken and when its report actually reaches the Evaluation Unit.

on reach and impact, and others examine governance questions. The implication is that when IDRC queries this disparate set of reports with cross-cutting questions, there is no guarantee that a reviewer will find a lot of substantive information. In this case, evaluation reports reflected on sustainability issues of networks to varying degrees: some contained thoughtful paragraphs, others had only single sentences or isolated comments. Some comments were more implicit than explicit.

c. ***Program Initiative (PI) external reviews***. IDRC's PIs undertook external reviews in 1999 and 2003. The latter proved more useful for this study, for they contain more substantive comments about PI network strategies, as well as some case studies of individual networks. All nine external reviews from 2003 describe networks and networking as PI strategies, but they vary in the level of detail they provide about the sustainability questions asked in this review.

d. ***IDRC Grey literature on networks***. Starting with the 1995 strategic evaluation of networks, this review also includes other strategic studies from the Evaluation Unit, studies on networks as program delivery models from other parts of the Centre, discussion papers, and notes from IDRC learning events. These documents raise many broad questions and observations about networks that were helpful to this study.

e. ***Selected Literature from Other Organizations***. The Evaluation Unit provided a set of documents from other organizations that have helped shaped IDRC's approach to networks. This literature helps contextualize some of the issues that arise in this review.

In total, I reviewed 164 documents over a period of five months. The bibliography contains a full list of documents covered in this review (Appendix A).

This study uses a very broad definition of "network". The types of networks that the documents describe are extremely diverse. Some contain a small number of individual researchers or institutions working collaboratively on a research program with no overhead coordination structure. Others started as a mechanism to share findings among thematically related IDRC-supported projects, but became a dynamic space for researchers to develop and implement whole new research agendas and approaches. Some networks include thousands of people. Others developed into complex organizational entities with a full complement of staff and infrastructure. This diversity made it difficult to address some of this study's research questions, but it was possible to identify some common themes, especially with respect to factors affecting sustainability.

Different sets of documents spoke to the four separate questions addressed in this review. For example, the discussion of first question, "What does IDRC mean by sustainability for networks?", compares comments found in documents written by IDRC staff (e.g., PCRs, corporate documents), with those of evaluators and outside authors.

In contrast, the second question on when sustainability is or is not a goal for networks, looks first to comments on individual networks from PCRs, evaluation reports, and case studies from PI external reviews. Some PCRs are especially helpful in clarifying the intent, hopes or assumptions that existed about the network's lifespan and sustainability. However, **most**

[3] (A full list of the documents reviewed is included in the Works Reviewed section in Appendix X).

documents, although explicitly or implicitly assuming that the network would continue to exist, are vague about how long networks were supposed to last, or what measures might be in place to ensure their sustainability. These comments are then compared to the findings from the specific networks to more general comments about network sustainability in IDRC grey literature. Some interesting contrasts emerge.

The section on factors affecting sustainability draws evenly from all sets of documents, as IDRC-supported networks share similar challenges to networks supported by other development organizations. Since IDRC's approach to networks starts with them as social arrangements, this section starts with factors of internal relationships that affect sustainability. From there, the report covers factors affecting external relationships, ongoing relevance, financial issues and institutionalization. IDRC-supported networks are exceedingly diverse, and operate in vastly different contexts for different purposes. Therefore, not all factors will be relevant for each network. However, in keeping with the implementation-focus of this review, the review tries to draw out examples from the literature on how networks have dealt with the various factors in order to achieve some measures of sustainability.

Unfortunately, there was next to no explicit information about the factors that facilitate the productive functioning and satisfactory winding-down of time-limited networks. Few documents grapple with how long specific networks might actually last. Based on the limited information available, Section Six draws out some initial questions about this issue.

The report also highlights issues pertaining to IDRC's performance in funding and promoting sustainability for networks. The concluding section of this report summarizes this information, and reviews the report's findings overall.

This report synthesizes what IDRC knows about network sustainability. As such, some sections may seem obvious to IDRC readers who work intimately with networks. However, this paper tries to expand on common wisdom by providing implementation-focused examples from networks described in the documents. For instance, it is clear that ownership is critical for sustainability; however, *how* do you help facilitate the development of ownership? Again, sustainable networks are supposed to be flexible, but how do you nurture flexibility?

As explained above, this study is part of a larger effort. This review is complemented by two other document reviews on the intended results of IDRC-supported networks, and issues of network governance and coordination. The findings of all three studies will be presented to the Network Working Group in November 2004. These papers, the NWG discussion, and a series of interviews with IDRC staff and network coordinators will then inform the design of a survey that IDRC will conduct with members of IDRC-supported networks on the three issues of intent, governance and coordination and sustainability. All of these pieces of the evaluation process will be brought together in IDRC's first Annual Learning Forum in April 2005 that will focus on networks.

3. What does IDRC mean by sustainability of networks?

"Sustainability" is a very popular term in development circles. According to the *New Webster's Dictionary and Thesaurus* (1991), sustainability would refer to: "to prevent from falling, collapsing or giving way, especially for a time; to keep going; to support, bear; to endure". At its heart, the definition of sustainability refers to something that lasts. Within international development circles, the word refers variously to financial, administrative, technical, environmental, and cultural sustainability; and it is applied in different situations to processes, impacts, relationships, and to institutions.

"The sustainability of networks" can also be examined from different angles: the sustainability of their structures, the relations among network members, their research products, or the impacts of their research. This review limits the discussion of sustainability to the network mechanism itself – i.e., the formal or informal social arrangement of individuals or institutions.

It is questionable whether sustainability for a network is necessary or important (see Gross Stein and Stren 2001:10). The word "sustainability" connotes a certain moral quality in development circles, stemming from its use in the term "sustainable development". However, networks are merely a program delivery mechanism. To assume that a network must be sustainable might confuse a process for its impact. Improved livelihoods, environmental integrity and other development goals ought to be sustainable; networks that work toward those goals need not be. However, for those networks that require more time to 'gel', to undertake collaborative activities, to establish a credible track record, and to meet their objectives, achieving some level of sustainability is important.

In all the documents this study covers, no author provides a definition of network sustainability. Given the enormous differences among the networks included in this review, a single definition may be neither possible nor practical. The best common definition would be: "sustainability means that a network continues to function until it achieves its goals, or until its members are no longer willing or able to continue, or until it becomes irrelevant". A more helpful approach may be to look at various dimensions of sustainability that authors refer to when discussing sustainability for networks. These include time, financial, relational, and processes and structural dimensions.

3.1 Time Dimensions

According to IDRC, if a network is said to be sustainable, how long should it last? The documents suggest three points on the time dimension of sustainability:

The life-spans of networks vary. The networks described in the documents functioned for between two years and more than two decades.

An appropriate time frame for a network is partly a function of its purposes. Three of the main purposes for IDRC-supported networks are: improving research quality, building capacity, and improving utilization of research results.

Some networks that focus on *improving research quality* have had short time-frames. For instance, the Fiscal Reform and Structural Change network lasted only two years. In this network, carefully selected researchers were funded to implement a given methodology and to collaborate in clearly defined ways. According to its evaluation, the network mechanism was successful in improving research quality (Milne 1995). Other networks which focus on

improving research quality have had longer time frames. Those that bring together stakeholders to first define a research agenda, implement studies, share findings and then further define new areas of work can work together for many years.

Capacity building networks have required longer time frames. For instance, the African Economic Research Consortium's training mandate has benefited from many years' experience. The Asian Rice Framing Systems Network not only trained individual scientists, but it also built the capacity of national agricultural research systems to undertake farming systems approaches to research. That was a long-term process that the network accomplished over its twenty-year lifespan (Chater and Carangal 1996:53).

Networks that focus on research utilization, such as the commercialization of research results or policy influence, also vary in lifespan. Crucible I and II set short time-frames for their work to influence policy on plant genetic resources. However, policy influence can also require a longer-term time horizons. In the case of the Asian Fisheries Social Science Research Network (AFSSRN), the network began to undertake policy-relevant research only in its fourth phase. This focus arose only after it had built a base of research experience and developed a reputation that led to requests for policy advice from government officials (Carden and Neilson 2003:16).

Some networks emerge incrementally. Some networks began with the intention of only lasting for a single two or three-year phase. However, the members then decided to continue working together. For example, in 1989, researchers from ten IDRC-supported projects came together to form Mollusc Culture Network (MCNet). Although MCNet started as a single-phase initiative, the researchers involved sought to continue MCNet in a second phase. During the second phase, they decided to broaden the scope of the network from its technical focus to include social science aspects of the impacts of mollusc culture and aquaculture on coastal communities. They renamed the network the Coastal Resources Research (CoRR), and brought in social scientists and NGOs. Also during CoRR's second phase, the network birthed a new network focused on islands, called the Island Sustainability, Livelihoods and Equity (ISLE) network. IDRC went on to support CoRR into a third phase that lasted until 2000.

3.2 Financial Dimensions

For IDRC, sustainability does not necessarily mean that networks are financially self-sustaining. The documents show that IDRC does not assume that many of the networks it is involved with will be able to cover their full costs from the commercialization of research results, selling services, membership fees, or other forms of revenue generation. Certainly, these strategies have provided some income for some networks (Section 5.4.4 will discuss this in greater detail). However, most of the more formal networks that IDRC has supported rely on external support. Having said that, the literature consistently argues that it is not sustainable for a network to rely only on IDRC or any single donor as its only source of income. Financial sustainability requires networks to secure financial and material support from a variety of sources: donors, clients / users, members, hosts, and other stakeholders.

3.3 Relational Dimensions

Since IDRC's concept of networks begins with them as social arrangements, the Centre emphasizes relational dimensions of sustainability. As Fitzgibbon writes, "Money supports programs, but programs are not the sum total of a network. People, relationships and personalities are what gives the network life and it is only when people use resources in a way that furthers the success of the network relationships, that a network is sustainable" (in Gross Stein and Stren 2001:91).

Sustainable networks do not necessarily have a static membership. Sustainability does not imply the same members continue their involvement throughout the whole life of the network. Indeed, the literature shows that network members can - and in some cases, need to - change over time. Continuity is helpful when getting established (e.g., the Regional Development and Indigenous Minorities in Southeast Asia [RDIMSEA] network suffered when two key initiators left just after it was established (Michaud 1995:5)), but once a network is established, turnover can be normal and healthy. For example, The University Partnerships in Essential Health Research network (UPP) was designed to last a long time, but to have members move 'through' the network. As they learned how to implement the practices of community-based medicine, they would move on and other institutions would join (Gelmon 1995:38).

3.4 Processes and Structural Dimensions

IDRC has acknowledged that allowing networks time to become sustainable has sometimes taken precedence over producing immediate research results. One PCR claimed that IDRC used to take high quality research and researchers and form them into a network. Now, IDRC helps highly qualified researchers come together in a network, and waits for them to produce high quality research (PCR 000883).

Sustainable networks demonstrate flexibility in adapting to internal and external change. IDRC-supported networks have changed their title, their focus (e.g., adding policy advocacy to their mandate), their subject (e.g., by becoming multidisciplinary), their methodologies, the products they offer, their governance structures, and their ways of engaging stakeholders. Some networks have several more-or-less continuous incarnations (e.g., the Vietnam Sustainable Economic Development Project (VISED), developed into the Vietnamese Economic and Environmental Management Program (VEEM), parts of which continued as VERN, the Vietnamese Economic Research Network).

IDRC believes that some formal networks can become more sustainable if they have an independent status, or at least a stable institutional home. The documents reviewed suggest IDRC likes to see networks devolve from being funded and housed within IDRC to becoming separately incorporated as an independent entity. Alternatively, IDRC encourages networks and/or their important activities to become housed in other stakeholder institutions which will likely have a long-term interest in the network.

Finally, the documents raise the issue that ***sustainability can require building the capacity of both individual and institutional members to participate in and manage networks.*** IDRC has supported information and communications technology (ICT) connectivity and training to allow organizations to participate in networks. It has also helped build the capacity of Southern institutions to manage complex research networks. For example, the Centre set out to help the Centre for Studies on State and Society (CEDES) build its capacity to manage complex international networks so that it could house the Finance and Changing Trade Patterns Network (PCR 003252).

3.5 Conclusion

This document review did not find nor create a single definition of sustainability for networks. However, the documents reveal several dimensions of network sustainability, including time, financial, relational, and processes and structural dimensions.

The documents reviewed in this study may have avoided suggesting life-spans for particular networks because of a belief that a donor does not decide whether a network will continue or not. Rather, the network members are in the best position to decide for how long they will continue to collaborate. However, it is still appropriate for a donor like IDRC to address sustainability for several reasons. First, the documents describe IDRC as being involved in the instigation of many of the networks it supports (e.g. MIMAP's PEP networks). As such, it has significant influence in how these networks are designed and how long they will operate. Second, IDRC accepts that many of the networks it supports will require donor funding to operate to the level to which it aspires. So the Centre could at least outline its own plans for involvement, so the network could better plan sustainability strategies. Third,

IDRC acts both as a member and a donor of many networks, so it is a stakeholder on multiple levels.

4. From IDRC's experience, when is sustainability a goal for networks, and when isn't it a goal? Why?

From IDRC's experience, when is sustainability a goal for networks? According to the documents reviewed, the answer would seem to lie somewhere between "almost always" and "perhaps too often".

4.1 When sustainability is a goal

In the short-form PCRs, evaluation reports, and external reviews, the vast majority of the networks discussed were expected to continue beyond the then-current phase of project funding. A conservative calculation suggests that 85% of the networks were projected to continue beyond the initial or current phase (some networks had already had two or three phases of IDRC support).[4] However, documents are consistently vague about exactly how long IDRC and network members expected the networks to last. The documents sometimes comment on whether a network ought to proceed into a subsequent phase (e.g., Drescher and Graham's 2003 mid-term review of the Resource Centre on Urban Agriculture and Forestry [RUAF]), but they do not offer suggestions on how long in total a network might be expected to continue.

The documents reveal no discernible difference in expectations for sustainability according to IDRC program area, formal versus informal structure, size or purpose of the network. The only regional difference is for networks operating in Africa. Some documents note that weaker research systems in some African countries might make it more challenging to find an adequate institutional base to which IDRC could devolve a network (Habito et al 2004). As well, English argues that network coordinators from areas like South America might be able to work on a part-time basis. However, having a coordinator who is trying to piece together a living on part-time employment in sub-Saharan Africa "is probably a recipe for frustration" for a network: "The other competing activities required to piece together an acceptable standard of living inevitably impinge on the part-time coordinator's commitment. Since the members of any network are invariably in a similarly precarious position, they are unlikely to stick with a network unless it is being energetically and effectively driven by the coordinator." (English 1995:4)

However, even noting these differences in regional context, no document suggests that networks in Africa should not be geared toward sustainability. Indeed, some of the most

[4] Arriving at firm numbers for this review was extremely difficult. For one thing, networks can be so flexible that they are hard to count. Some IDRC-supported networks have merged together (e.g., the Eastern and Southern African Technology Policy Studies [EATPS] network and the West African Technology Policy Studies [WATPS] network became ATPS), some have spawned new networks (e.g., the Coastal Resources Research [CoRR] network bore the Island Sustainability, Livelihood, and Equity [ISLE] network), and some reincarnated themselves (as noted above, VEEM built on previous work, and parts of it continued as VERN). The percentage given here should be taken merely to indicate a vast majority, rather than a precise figure.

secure, respected and sustainable networks that IDRC has supported are in Africa (e.g. the African Economic Research Consortium [AERC], SchoolNet, the African Technology Policy Studies [ATPS] network, and the Trade and Industrial Policy Secretariat [TIPS]). It would seem that the expectation for sustainability is consistent with expectations for networks in other regions; it is perhaps only strategies toward sustainability that differ. Further investigation might inquire whether IDRC tends to support the institutionalization of networks in Africa, perhaps more so than networks elsewhere, as a way of making them more sustainable.

4.2 When sustainability is not a goal

Among the networks reviewed in PCRs, evaluations and external reviews, sustainability rarely is *not* a goal. If one were only to look at comments on individual networks, it would seem that IDRC almost always intends for networks to be sustainable for some (undefined) period of time. Networks that specifically did not seek to continue are striking exceptions within the documents reviewed. The networks which were not expected to be sustainable include:

- ones which undertook a very circumscribed project with limited, defined levels of interaction,
- networks which were no longer needed for their context or purpose, and
- some small grants programs.

In a few cases, IDRC helped arrange a network of researchers to undertake a specific, previously-defined research program that could be accomplished in a limited time. The networks included time for members to get to know each other, learn, collaborate, and produce results. An evaluation of two of these networks, *Reform and Structural Change* network and the *Labour Flexibility and Productivity*, asks about the utility of using networks as one-time arrangements. The evaluator argues that the networks did add value for the members and produced higher-quality research than a set of individual studies would have accomplished. He therefore concludes that such time-specific networks ought to be used within IDRC (Milne 1995:12).

Other networks disband once they have met their objectives or their context changes. The booklet *On Farmers Fields* concludes its review of the Asian Rice Farming Systems Network (ARFSN), by saying that the network was poised to disband after 20 years in existence. The authors provide no detail on how the network came to the decision to disband, but suggest that the network was no longer needed. They reason that individual Asian countries had achieved sufficient scientific capacity and resources to be able to support their own agricultural research (Chater and Carangal p.59), and therefore the regional network is no longer necessary.

Some small grants programs (SGPs) support networking projects, but they do not purport to make those networks sustainable. SGPs can contribute to network sustainability (see section 5.3). However, either by design or oversight, some SGPs do not facilitate connections among awardees, or ensure the awardees are connected to a PI's other networks.

It would be interesting to pursue the question of why IDRC tends to avoid time-limited networks and seems to prefer leaving commitments fairly open-ended. Perhaps the interviews conducted for this evaluation of networks might reveal some perspectives on this

matter. The results of this document review are particularly interesting in light of IDRC's own grey literature, which suggests that time-bound networks might be appropriate in more situations than what seems to be the case currently.

4.3 A contrasting view from IDRC grey literature

When directly addressing the issue of sustainability for networks, several IDRC authors emphasize that networks should not be expected to exist in perpetuity, or even for the long-term. "Long term" is, unfortunately, also not defined, but might refer to the period past the 5-7 years that it has been found many formal knowledge networks take to become productive (Bernard 1996; Church 2003).

Reflecting on a network that dissolved during its fourth phase, one PCR notes that IDRC ought to be willing to help wind down networks that are no longer effective or relevant (PCR 003252). Moreover, referring to agricultural research networks, Li Pun and Koala argue:

> Networks do not need to be permanent. On the contrary, they should establish clear goals and mechanisms from their conception, as well as estimates of needed time and resources, as well as periodic outputs. Periodic evaluations should be used as feedback mechanisms. Once goals are achieved, there should not be a need for their continuation (1994:12).

Similarly, a study by IDRC's Evaluation Unit notes that networks are not institutions, and need not exist forever:

> [Networks] are evolutionary, not sustaining *per se*; they do their work and disperse; members move on to other things either collective, individually or in different groupings…. networks are transient and voluntary and their results should link with existing systems and structures (IDRC Evaluation Unit 1996:6,7).

Specifically, the Evaluation Unit's study suggests that advocacy networks ought to be time-specific. However, perhaps because many IDRC-supported networks are multi-functional - conducting research as well as advocacy (e.g. Whyte and Tauli-Corpuz 2003:29) - there are few examples of time-limited advocacy networks. Even Crucible, a multi-stakeholder group examining plant genetics resources policies, which sought to learn from the experience of other multi-stakeholder processes that held to a strict time limit, ended its first phase, but came back as an expanded group in a second phase, Crucible II, to pick up the "unfinished agenda" of Crucible I (Stratos 2002).

4.4 Comments from Outside Literature

In making general conclusions about IDRC's experience with networks, the Centre's grey literature emphasizes that not every network ought to have the goal of sustainability. This corresponds with conclusions made by people outside the Centre as well. Gross Stein and Stren question whether sustainability is an appropriate criterion on which to evaluate networks at all. They point out that the network mechanism is sometimes used precisely because it allows for flexibility to deal with uncertain resources. They suggest, "[it] may be that the comparative advantage of knowledge networks, in comparison to their more fixed [institutional] counterparts, is their capacity to come and go" (2001:10).

The documents suggest that there are benefits to leaving expectations about network life-spans open-ended. It allows for flexibility so networks can evolve and grow according to members' wishes. However, there are also benefits to explicitly embarking on time-limited networks. Reviews of multi-stakeholder processes note that time-limitations give members confidence that they are not committing to endless processes which might not achieve their ambitious agendas (Stratos 2002, Reinicke and Deng 2000). It can also add an extra impetus to keeping the network working efficiently and producing deliverables as planned.

4.5 Conclusion

The vast majority of PCRs, evaluations, and external reviews shows that the designers of the individual networks reviewed expected (some degree of) sustainability for their network. This review found a lack of discussion of network lifespan, or indicators that would signal a network might soon conclude its activities. The latter may have been helpful to networks like the Macroeconomic Research Network and the Educational Research Network for Eastern and Southern Africa (ERNESA) which, as will be described below, came to less-than-positive endings (PCRs 001229 and 002879). There may be a gap between theory outlined in IDRC's grey literature and practice described in the evaluation documents that raises the question of whether the Centre ought to be more clear about its intentions for how long it will be involved in specific networks.

5. What factors help or hinder the sustainability of networks?

The documents reviewed revealed many factors that help or hinder the sustainability of networks. These factors can be grouped into five categories:

- Internal relations,
- External relations and contextual factors,
- On-going relevance,
- Financial aspects, and
- Institutionalization.

This section deals with aspects of each of these factors in turn. This review is tailored to an audience that works in and with networks regularly, and seeks to improve its practice. As

such, these sections attempt to highlight ideas and examples from networks that have grappled successfully or unsuccessfully with the sustainability challenges they faced.

5.1 Internal Relations

Bernard defines networks as "social arrangements" to emphasize that they are primarily about the relations among the people and institutions within the network. Internal relationships are thus critical to a sustainable network. Bernard states, "While use of a networks' products is one condition of its being sustained, it rarely seems a sufficient one. More important to sustaining continuity than what the network produces for clients appears to be what it provides its members by way of personal and professional satisfaction" (Bernard 1996:22).

The documents reviewed showed that a network's sustainability can hinge on these aspects of internal relations:

- Shared ownership and mutual trust;
- Dynamism of connections and interactions among members;
- Open versus selective approaches to membership;
- Individual versus institutional membership; and
- Allowing for varying levels of engagement with the network as opposed to insisting on a strict approach to equality of relations.

5.1.1 Shared Ownership and Mutual Trust

As a social arrangement, healthy internal functioning is key to a network's sustainability. Shared ownership and mutual trust are crucial aspects of this healthy functioning. Ownership has been described as follows:

> Revealed typically in members being actively engaged, ownership expresses the phenomenon of *members working **within** a network, not **for** it* (IDRC PO); not simply performing the business of the network, but taking responsibility for ensuring that that business remain important, beneficial and well implemented. (Bernard 1996:25)

Ownership, then, implies that members feel they drive the network as a whole; they do more than just contribute to some of its activities. For example, one evaluation reports that members did not feel a high level of ownership of networks supported by the International Livestock Centre for Africa (ILCA). Members reported that they felt their contribution to the networks was to do research and offer opinions on network activities. They did not feel that managing the network or deciding on its agenda was their responsibility. They felt the networks belonged to ILCA, rather than to the members themselves. Notably, members reported that horizontal communication within the networks needed improvement, and stated that their interactions were undermined by language barriers. This lack of horizontal interchange may have been the reason that members were left feeling *responsible to* an oversight body, rather than *responsible for* the network as co-creators of a jointly-owned and jointly-driven network.

How do you facilitate sharing ownership and building trust within a network? The documents emphasize that ownership is improved when members are involved in the initial visioning for the network, and when they clearly understand its purposes. In addition, the documents describe several other strategies that networks have used to increase shared ownership and mutual trust. Seven of these are outlined below.

Supporting existing versus newly-created networks

Some short-term, project-specific networks have worked well, whether members are brought together by IDRC to undertake collaborative research (Milne 1996), or whether they are an existing group seeking support for an activity. However, Balan argues that if IDRC wishes to support networks that have a good chance of continuing to exist past IDRC funding, the Centre ought to look for networks whose members were already working together, or those who intend to do so after the activity finishes (1998:11).

Devolving responsibility for network publicity and finances to members

In terms of network publicity, the International Model Forest Network built ownership by getting members, rather than the secretariat staff, to advocate for the model forest concept at conferences and in international presentations (Armstrong et al. 2000:22).

Fund raising, critical for many networks described in the documents, was sometimes devolved to members to increase ownership. In the example of the Climate Change Knowledge Network (CCKN), the network had funds for its initial operations and proposal development. From there, members sought donor funding for the projects that the network had reviewed and approved. Thus, fundraising was not the sole responsibility of coordinator or the central secretariat –members raised money for network projects (Creech and Willard 2001:79). Partly arising from this experience, Creech and Ramji argue that sharing responsibility for fundraising is "an important signal that the network is in fact operating as a network rather than as a collective of grant recipients" (2004:13).

Devolving decisions about internal funding allocations has also increased members' sense of ownership over a network. It also increased members' trust in the fairness of the decisions made. As an example, in the first phase of the Sustainable Development Communications Network (SDCN), the International Institute for Sustainable Development (IISD) directed equal grants to all four members of the network. This arrangement, though easy to administer, had two problems: it made each member responsible to IISD, not to each other, for their performance. It also meant that all information was directed to the coordinating body, rather than shared horizontally for collaboration among the members. In the next phase, IISD asked the network members to meet face-to-face to decide on funding allocations. The members first reviewed what research was already underway in their institutions. Then they decided which initiatives ought to get SDCN money for dissemination, and how much would be necessary. This resulted in members getting unequal grants from the network. As well, different people took leadership roles, depending on what needed to be done. Authors who reviewed the network explained that "[interactions] among members increased significantly; and the quality of joint projects improved considerably as a result. However, the management of contracts across the network became much more onerous…" (Creech and Willard 2001:79). The authors did not explain in what way the management became onerous, nor how the secretariat managed the increased workload.

Supporting communication across language barriers.

As described above, it seems that language barriers contributed to the lack of ownership members felt within ILCA-supported networks. Networks that made the effort to be multi-

lingual have had more success in developing strong relations with a diverse group of members. For instance, Mistica (the Samana Network) used the Effective Management of Multilingual Electronic Conferences (EMEC) methodology for its virtual community. In this methodology, postings are quickly automatically translated into the four working languages of the group. They are also summarized manually, and translated again in order to reduce information overload for network members. The costs for manual synthesis are high, but Mistica deems it worthwhile, since the virtual community provides the space for members to continually reshape the network and its work (PCR 004235).

Rooting networks at the level from which they will eventually need to seek sponsorship.
Goldsmith (1995:19) noted that because donor fatigue will inevitably set in, networks must have some grounding in research institutes or governments to which they can eventually devolve. She argues that these actors ought to be involved in creating or at least setting the direction for these networks so they will have a sense of ownership over them. A challenge to IDRC's PIs may emerge in the future as they support regional networks to address trans-national issues (such as trade in the Mercosur, HIV/AIDS in agriculture, peacebuilding in the Horn of Africa, ecosystem health, and biodiversity issues that span ecosystems instead of than national boundaries), for which it may become harder to find appropriate regional institutional homes.

Situating the level of membership appropriately to promote continuity.
This issue will be dealt with further in section 5.1.4 on individual versus institutional membership. However, one example merits mentioning here as well. In designing a parliamentary network in the South, Smyth notes that parliamentary staff might be a more appropriate level of membership than MPs. The staff could provide some constancy and institutional memory in a group that might otherwise experience large-scale turn over with each election. The turn-over could also bring about the end of the network if the new government feels no ownership of an initiative started by MPs from the previous era.

Ensuring that ownership is <u>shared by</u> members, not <u>exercised over</u> them.
The definition of network used in this paper emphasizes that members of networks join together voluntarily, retaining their autonomy and previous personal and institutional commitments. Church (2003:31) describes how a network honoured the autonomy of members and ensured a high level of mutual trust by not attempting to over-represent levels of consensus for any issue about which it published. Whenever the network published or initiated something, it took care to list only members who had actively signed off on the statement or action. Members were free to remain part of the network without endorsing everything it did. They were not pressured to participate or come to consensus beyond what their institutions would support.

The issue of member autonomy raises a problematic issue for network ownership: members who bring multiple loyalties and dynamic backgrounds to a network might not be able to commit to its directions, positions or targets. As Lusthaus et al point out, "[members] may adopt ambiguous behaviour depending on time and circumstances and multiple boundaries, the boundaries themselves being somewhat fuzzy." (1999:169,170) Although this fact can limit efficiency and frustrate a network trying to achieve its goals, it cannot be remedied by trying to force members in line. Indeed, Tandon notes that a coordinators can help ensure autonomy is respected. "… [C]oordination has to be carried out in an educational and learning way, and not in a controlling and manipulating way" (1995:18,19).

Easing transitions from loose, decentralized networks into more centralized ones.

As some networks expanded and matures, they decided to make their coordination functions more centralized, institutionalized, and formalized. Documents note that, if mishandled, this change could lead to members becoming alienated from the network, and suspicious of its intent. For example, in its evaluation of The Community Biodiversity Development and Conservation Programme (CBDC), Universalia notes that some members expressed a lack of trust about the changes and moves toward centralization within the CBDC. They feared that the network would lose its "original, decentralized and bottom-up spirit". Universalia suggests that although the fears were voiced by a minority of members, they should be dealt with openly and transparently to ensure people understand why the coordination was becoming centralized, and to try to rebuild trust (1999:22).

5.1.2 Dynamism of connections and interactions among members

Networks will not be sustainable if the dynamism of interactions among members is lost. As Bernard put it, "Networks may be designed as information connections (e-mail, computer-linked data-bases), but their success depends on the extent to which they allow members and users to interact directly with one another, and to reconsider how they think or what they do as a consequence of this interaction" (1996:26). This section deals with a limited range of factors that lead to dynamic interactions, as many other factors that arise in the documents relate more to network coordination, the topic of a separate study. This section, instead, will touch briefly on the need to assess whether network members are sufficiently compatible to work together, the importance of sharing leadership within the network, and examples from the documents on how to encourage and facilitate horizontal communication among network members.

Ensuring that members of the network can collaborate

Diversity within network membership can stimulate creative thinking, encourage innovation, and expand reach. However, the documents provided a couple of examples where the diversity among members was too vast to bridge into productive working relationships. In one case, RDIMSEA linked researchers studying indigenous issues in South East Asia. Members spanned many divides, including: urban/rural bases, academic versus activist focus, local/outsider, Asian/Western cultural perspectives, different research agendas, different policy contexts, different religious worldviews. As Michaud (1995:7) puts it, "in this case, it could almost be said that the populations under study had definitely more in common, despite their ethnic and historical particularities, than the people funded to study them. This observation leads us to think that there may have been a confusion, in the mind of the architects responsible for this network, in wrongly assuming that organizations studying similar people are also significantly similar between themselves."

Sharing leadership

The documents describe many visionary, competent and charismatic people whose energy sustains the networks they lead. However, this is not always a sustainable strategy in the long term. Rather, instituting structures and systems for shared, or even rotational leadership has helped some networks ensure that they do not rely too heavily on just a few people (Creech 2002:124, Tandon 1995:25, Church 2003:32).

Facilitating horizontal communication within the network

Many networks started as a hub-and-spoke arrangement, with most information, ideas, and projects all coming through a central coordinator (e.g. SDCN described above). However, in some cases, this arrangement became quite costly in terms of time and resources for the

coordinator. Creech and Willard argue that networks which facilitate interchanges among members are more likely to develop ownership, maturity, and ultimately, sustainability (2001:65,66).

The documents reviewed showed different strategies for encouraging horizontal exchanges among network participants:

- The African Technology Policy Studies (ATPS) network decided to launch cluster projects to link members from different kinds of institutions, and pick interdisciplinary topics like biotechnology and bioengineering that would encourage new teamwork (Chudnovsky and Makhubu 1996:5).
- The SDCN helped member organizations get interns to help implement network activities. The interns became the "glue" for the network. Their presence was a physical reminder of the network, their work accomplished network activities within the organization, and their contracts linked organizations to the national coordinating unit (Creech and Willard 2001:22)
- The International Forum for Rural Transport and Development's (IFRTD) newsletter included only short summaries of people's work, with a contact address, as a way of encouraging people to contact each other directly (Church 2003:31)
- Face-to-face communication stands out as a key way of getting members to interact with one another. In the Global Urban Research Initiative (GURI), not all members regularly communicated via email, and the website didn't get generate a lot of enthusiasm. The meetings "did the most to bind the network together." One GURI member commented that 'without a doubt, the meetings have been the most important element of the network.' (Maclean in Stein and Stren 2001:94). Even the PCR which describes the success of Mistica's virtual community, also notes the importance of their face-to-face meetings (PCR 004235).

5.1.3 Open versus selective approaches to membership

The documents describe some networks where membership is restricted to selected individuals or institutions, and others that are open to anyone who is interested in participating. These different approaches also have implications for sustainability.

Selective, or Closed networks

Some networks are selective on the basis of members' credentials. In his review of Canadian Centres of Excellence, Clark argues that "closed" or selective networks can become prestigious. One of his examples is the Canadian Network of Toxicology Centres. It has an advisory board that approves new projects. It rejects unsuitable proposals, and can expel researchers from the network for unsatisfactory performance (Clark 1998:51). Clark argues this kind of network attracts high quality members and produces high quality results that allow it to attract funding and investment that assure its continued existence.

Other networks are selective to certain categories of members, for example, researchers, NGOs, policy makers, and industry. For example, the African Economic Research Consortium (AERC) faced the question of whether to open its membership to include policy makers. An evaluation of the Consortium recommended against this. The evaluators warned that the inclusion of policy makers could undermine AERC's independence. As members, policy makers might pressure the network into responding to their concerns in ways that could fragment or rush its research program, and thereby undermine its quality. These potential problems could undermine the sustainability of the consortium. Rather than

bringing policy makers directly into the network, the evaluators suggested AERC could undertake more policy-relevant research, invite policy makers to address its meetings, and tailor some of its products to specific audiences (Henderson and Loxley 1996:77,78, see also Habito et al. 2004:10).

Open networks

On the other hand, Creech and Willard point out that especially in international development circles, inclusion can be a high normative value (2001:21). Inclusion can also be a practical imperative, as seen in multi-stakeholder processes which would be undermined if they were seen to be excluding key stakeholder groups or perspectives (Reinicke 2000:79). Inclusion, thus, can support a network's claim to legitimacy and accountability, without which it would be unsustainable.

Moreover, reflecting on the experience of the Macroeconomic Research Network (Latin America), IDRC staff wondered whether part of the reason the network became irrelevant and eventually dissolved was because its membership was not sufficiently open:

> [The experience of the Macroeconomic Research Network (Latin America)] suggests a possible tension between this kind of a relatively "closed" network – which involved a small number of leading research institutions identified by IDRC – and more flexible, open structures such as LACEA [Latin American and Caribbean Economics Association]. Both have their value, but the more open networks are arguably more resilient to external shocks. (PCR 002879)

Although the PCR did not elaborate on this point, the comment raises the question whether welcoming new people into the Macroeconomic Research Network might have made it more aware of changes in the regional research context, and spurred it to adapt to find new niches for itself.

However, open networks may face a challenge in maintaining high quality processes and outputs. Church et al. (2003) argue that cajoling and discipline (such as that described in Clark's review) have no place in an open knowledge network, where people join together voluntarily and
have the freedom to participate at whatever level they choose. Willard and Creech note that it is difficult for a network to enforce performance standards or insist on deliverables, especially when members are individuals, not institutions. They explain that if network membership is part of someone's job, her employer will include network participation in her performance review. However, if she is participating in her own capacity, there are few mechanisms to hold her accountable to the network (2001:91)

Striking a Balance?

Many networks that IDRC supports are closed networks. For example, networks that scale up results from previously supported projects identify researchers and others who ought to be included, and work with them to further develop research, policy, dissemination and other activities (e.g., CoRR). Since there seem to be advantages and disadvantages for open and closed networks in terms of sustainability, a network might try a balanced approach. Creech and Willard (2001:21) suggest that a closed network could invite outsiders to participate in workshops or e-conferences. Alternatively, it could open associate memberships for specific activities and working groups. The Sustainable Development Communications Network is an example of a network which uses levels of membership and decision-making authority to allow for varying levels of involvement without undermining the networks' ability to shape

and undertake coherent and high quality work (Creech 2002)

5.1.4 Individual versus Institutional Membership

IDRC's documents about networks often raise the question of whether to have institutions or individuals as members. In terms of network sustainability, evidence from the documents suggests that institutional membership has advantages over individual membership. However, there are trade-offs.

Individual membership respects the fact that individual people bring the energy, ideas and momentum that drive a network (Church 2003). Moreover, it is easier to get collaborative work done by groups of individual researchers than by trying to get institutions to align their priorities enough to undertake a common effort. Individuals acting in their personal capacity can also be more flexible in participating in multi-stakeholder negotiations and consensus-building (Stratos 2002:32). Networks may also be able to reach a broader range of members when they move beyond people attached to traditional research institutions (Habito et al. 2004:35).

However, the documents note that institutions can provide continuity, resources, on-going mandates and broader circles of contacts and influence that help toward sustainability. These are expanded on below:

- ***Continuity:*** When individual members leave a network, they can leave gaps that are hard to fill. Institutional members replace departing representatives, ensuring continuity despite staff changes (Creech and Willard 2001:75).
- ***Resources:*** While individual members bring their energy, ideas and commitment, institutional members can support these contributions with office space, on-going salaries, administrative and ICT support for their representatives in the network (Tandon 1995:19, IDRC 1995:8).
- ***On-going Mandate:*** An individual is accountable to herself and other network members for her involvement. When institutions are members, their representatives are also accountable to their home institution for their participation. Institutions link network priorities with their institutional mandates, which can be more durable than personal commitments (Creech and Willard 2001:20).
- ***Broader circles of contacts and influence:*** When an institution is a node within a network, it acts like a network within a network; institutions have their own circles of contacts and influence that are generally broader than those of individuals (Creech and Willard 2001:59). Especially when seeking to influence policy, or finding funds for the network, this can be useful.

It may be possible to find a middle ground between individual and institutional members. Yeo's background paper for IDRC's Trade, Employment and Competitiveness (TEC) PI on "Creating, Managing and Sustaining Policy Research Networks" cites the Secretariat for the Institutional Support for Economic Research in Africa (SISERA) and the Latin America Trade Network (LATN) as two networks which walk a line between individuals and institutions. SISERA targets capacity building and research grants to specific research institutes, as a way of finding a middle ground between individual researchers and large, established university departments. LATN supported clusters of researchers which organize around a senior researcher with good policy contacts. Yeo's paper argues that this approach "does not involve institutional support for a large number of institutions, but does offer some

of the advantages of institutions in sharing and spreading expertise and good research practice within (and among) the clusters" (Yeo 2004:7).

5.1.5 Equality versus Circles of Participation in Network Relations

On the issue of whether networks should have a hierarchical structure or an egalitarian one, the documents reveal a discussion within IDRC about the philosophy versus the practicalities of networking.

On the one hand, Kassam (1995) describes networks in almost ideological terms. They are non-hierarchical, non-bureaucratic, with decentralized authority, and with all members having something to contribute. In his description, no one member - especially a Northern member - is the "expert" and the sustainability of the network depends on the equality of relations within the network. He maintains that all members of the network must contribute equitably; if some only receive information without providing input, they create an imbalance of involvement versus responsibility (p18).

While still holding to network values of shared decision-making and collective action, other authors describe networks that arrange tiers of membership and involvement according to the willingness and ability of members to engage. The CBDC, for instance, while trying to maintain a decentralized and bottom-up approach, has central coordinating units and governing structures (Universalia 1999:19). As another example, the SDCN's second phase introduced three categories of membership based on the length and type of a member's involvement within the network. *Founding members* were involved from the project's inception; they oversee network vision and objectives. *Members* are involved in two or more network projects. *Affiliate members* participate in one project, or are linked with at least one founding member; they are only members for as long as their project lasts. Through this arrangement, the SDCN tries to emphasize that it is a "working" network, not one where members can be involved in more passive information-sharing for the long term (Creech 2002:7).

Another aspect of managing membership has to do with how to remove people from a network. The GURI evaluation reported that:

> when members 'weren't pulling their weight,' or were causing difficulties for the network, the coordinators' only recourse was to point to the stipulations in the research contracts. In addition, occasionally members who had joined GURI in one phase of research were 'out of sync' with the new perspectives in the next phase; nevertheless, they would insist on staying in the network – perhaps for financial reasons – and there was nothing that could be done about it. (Maclean in Gross Stein and Stren 2001:89)

The evaluation recommends that networks opt for a flexible membership approach, and renew network composition at each phase. This way, network members could be welcomed back (or not) at each phase, depending on their performance in the previous phase, or their compatibility with the directions set for the subsequent phase.

Circles of Participation and Power Relations within Networks

Church's concept of "circles of participation" might be helpful in this discussion of equality versus hierarchy within network relations. "Circles of participation" describes that members

engage in a network to different degrees, and their participation changes over time. Some members may only want to receive information from the network. Others are involved in specific initiatives. Still others are very active, have a long-term commitment, and take on leadership roles. Church does not use the circles as a means to categorize members of networks, or set them in a hierarchy, so much as a way of understanding how and at what level people wish to participate. A dynamic network may see people redefining their role frequently. Inclusion in decision-making depends on a member's level of participation (Church 2002:29,30). This approach is quite different from what Kassam proposes, but could be more pragmatic and sustainable for members who wish to be involved, but cannot take on an equal share of responsibilities as he describes.

The differences between Kassam and Church's models also raises issues of power relations within networks. Although networks are sometimes described as democratic and nonhierarchical, even in consensus-based, non-hierarchically structured networks, there will be power dynamics among members, sometimes surprising ones. For example, in a multi-stakeholder network involving NGOs and industry members, it might seem that industry would hold a lot more power because they control disproportionately large financial resources. However, NGO members' ability to launch media campaigns that could publicly shame industry set them on a fairly equal footing to negotiate industrial standards and external monitoring (Reinicke 2000:41,42). Individual personalities also play a role. In many networks, the visionary leader or hard-working coordinator was cited as critical to the functioning of the network. These people can have significant power, regardless of the formal structures, levels of membership or consensual decision-making processes that are supposed to be followed within the network. Further evaluation and discussion could help IDRC explore how to understand and deal with power relations within the networks it supports.

5.1.6 Conclusion

This section dealt with many factors within the broad category of internal relationships that affect network sustainability. Primary among these factors are issues of developing trust and shared ownership. A strategy toward building ownership is ensuring the dynamism of connections and interactions among members. Networks could try to balance the pros and cons of having a closed versus an open approach to network membership. On the debate of whether to have individual versus institutional membership, sustainability considerations might lead network designers to opt for institutions. Finally, networks might elaborate clear "circles of participation" that offer participants various ways of engaging with the network as a way of making participation sustainable, rather than insisting on an equality of relations within the group.

5.2 External Relationships and Contextual Factors

While internal relationships are fundamental for network sustainability, a network's relationships with outside bodies – donors, knowledge users, advocacy allies and targets, and sometimes the general public – and its context, are also important for its long-term viability. IDRC's 2003 meeting in Montevideo, Uruguay on Managing Knowledge Networks discussed "the social embeddedness of networks" in their social, cultural, political,

economic, and institutional contexts. This section will examine three aspects of this embeddedness that affect network sustainability, namely:

- Credibility,
- Constructive engagement and communication with stakeholders and targets, and
- Special considerations in violent contexts.

5.2.1 Credibility

As an informal or semiformal collection of individuals or organizations, some network have had a harder time establishing a credible reputation than a bricks-and-mortar institution. However, credibility is important for establishing its viability and sustainability. According to the documents reviewed, some networks improved their credibility in these five ways:

- ***Producing quality research and/or knowledge products.*** TEC's networks have a range of experience in this regard. Red Mercosur is known to produce high quality original research, which could lead to its institutional sustainability if plans develop for it to become an official body to support Mercosur countries' involvement in trade negotiations. TIPS enjoys great respect within South Africa; it is requested to provide policy advice to the government, and has been asked to expand its relations within Southern Africa and Latin America. On the other hand, although LATN's newsletters are held up as best practices to emulate, the network has also been criticized as being "shallow" because it doesn't produce original research (Fine et al 2001:39,58).

- ***Maintaining (and publicizing) high ethical standards for research and dissemination.*** The Gujarat Innovation Augmentation Network succeeded partly because people appreciated the way it recognizes and respects the people whose innovations they seek to popularize. The network is clear in attributing credit to local innovators and publishes everything in four local languages to be sure that information is accessible to local audiences. Like-minded organizations not only use and further publicize the network, but also look for innovations to contribute to its database (PCR 000051).

- ***Involving research users in the design of the network.*** The network on regional integration in eastern and southern Africa hired a consultant who used to work at the Common Market of Eastern and Southern Africa (COMESA) to bring the COMESA Secretariat into the development of the networks' research program. The secretariat, originally skeptical of the initiative, became an enthusiastic supporter. One of the goals of the project was to sensitize COMESA on the need to base policy advice to research. According to the PCR, COMESA not only used some of the network's research findings, but also created its own systems to do research and strategic planning (PCR 928467).

- ***Actively cultivating a reputation that leads to membership, expansion, institutionalization and revenue.*** The Venezuelan Red Nacional de Desarrollo de la Agroindustria Rural (REDAR) was the youngest, but fastest growing of all members of the program for development of rural agroindustry (PRODAR). Interestingly, they did so with very little money. An initial study on the needs and opportunities for strengthening rural agroindustry (AIR) resulted in the formation of a Network Promotion Committee. The Committee, which included many stakeholder groups, spread information about AIR at the national level, held a workshop, and AIR products fair. This led to the formation of not only a national REDAR, but several state-level REDARs. REDAR Venezuela was successful in linking many of its programs to local development contexts, and bridging between public and private sectors (Weber et al 1997:25-29).

- ***Ensuring that the network products are appropriate to the audience they are serving***. Networks often generate products for target groups. Understanding the targets' specific needs and preferences help the network decide what to produce, how to engage, and where to expand. For example, in aiming to provide advice for policy impact, Fine et al (2001:57) suggest that a network assess the "policy topography" before trying to duplicate a successful network model in a context that might not have an audience for policy research nor a policy process that allows for input.

5.2.2 Constructive Engagement and Communications with Stakeholders and Targets

The documents show examples of networks that nurtured constructive relations with donors, clients, allies and targets through engagement strategies, communication, and by being aware of the potential negative impacts they might have on others. All research programs face challenges of engaging with stakeholders, but these can be especially important when the network mechanism was chosen in order that the initiative might disseminate research results to a wider audience.

Maintaining constructive external relationships requires well-considered communication strategies. Creech and Willard point out that networks should look for communication capacities among the members it recruits, in addition to their research skills. They argue that networks will increase their reach if they ensure that the communications function is dispersed among members, rather than emanating only from the lead organization (2001:59).

Communications capacities have been channeled toward various stakeholders:

- ***helping networks function within politically charged contexts:*** The example of the Canadian International Scientific Exchange Program[5], CISEPO, illustrates this point. CISEPO needed to keep Middle Eastern government offices up-to-date on its activities. Both network members and government officials had to learn to negotiate through the cultural differences among them. Researchers in the network learned to work within the political environments of the region. "[K]eeping [government offices] informed of CISEPO's activities and ensuring good name recognition is essential to engender positive responses when they contact them regarding potential projects. As scientists and medical practitioners, CISEPO members have to learn to be politically and culturally astute." Fitzgibbon in Gross Stein and Stren 2001:97).

- ***connecting with users and funders:*** For example, the Olistica network struggled with effective communication. It had a hard time communicating on various fronts: articulating its purpose in understandable terms, distinguishing itself from another network – Mistica – that operated from the same host institution, and overcoming its reputation as "catchy" as opposed to substantive. This was problematic both in reaching its target users, and in marketing itself to potential donors to diversify its funding base beyond IDRC (PCR 100584). IDRC tried to merge this network into another project on ICT policy in Latin America, but eventually, the network was dropped because it failed to deliver the expected results.

[5] CISEPO is not an IDRC-funded network. It was reviewed in Gross Stein and Stren's 2001 book, *Networks of Knowledge*, which examined two IDRC-supported networks, and is used here for illustrative purposes.

- ***nurturing positive, non-threatening relationships with other organizations which serve overlapping purposes:*** The AERC, a consortium which has enjoyed secure international funding in part because of its good reputation, aims to cultivate positive relations with related organizations throughout Africa. It recognizes that it could be seen as a threat to them. Therefore, when discussing issues of research and education contexts in Africa, it ensures that it does not, and is not seen to be trying to, enlarge itself at the expense of these other organizations (Henderson and Loxley 1996:64).

- ***ensuring constructive relations with members' institutions:*** A network has the advantage of engaging members from many different institutions and/or knowledge or research systems to carry out its agenda. Network build on these links, but some also jeopardize them in how they operate. Networks often rely on members' access to their home institutions' information services, communications technology, administrative functions, and also their reputation and credibility as they do network business. This can complement their roles within their home institutions, but it can also take away from their regular functions. Networks can be demanding, especially for part-time coordinators. Documents often noted that key network members worked way beyond their remunerated hours to get their jobs done (e.g., Gross Stein and Stren 2001). This can undermine their ability to fulfill regular duties.

  More fundamentally, in his review of Canadian Centres of Excellence, Clark goes so far as to warn that networks may develop into the key way researchers work, undermining universities and ultimately rendering them mere "landlords" from which researchers operate. Further, Jeffrey Fine notes that the globalization of knowledge systems and the development of ICTs might force African universities to reassess their structures and functions. They might limit their own activities, both in education and research, and form strategic partnerships with other knowledge institutions (e.g., business schools) and networks globally to get paid to offer services locally (quoted in Söderbaum 2001:156).

5.2.3 Special Considerations in Violent Contexts

Networks that operate in violent contexts face special constraints regarding sustainability. For knowledge networks to exist at all in violent conflicts is difficult: research is difficult, researchers themselves are often at risk, and their research results can have dangerous political consequences. Moreover, each conflict is so particular and so absorbing that it may be hard for researchers to be able to collaborate with people outside their context, or to see the value in doing so (Brynen et al. 2004:12).

However, networks can be especially valuable in these situations. They can mitigate against the isolation researchers face, and even contribute to their personal security. Supporting networks in conflict-affected areas can help avert or stem violence, and contribute to national reconstruction (Gillies and Kelpak 1999 and Brynan et al 2003).

Gross Stein suggests that the current "security" environment also has implications for network sustainability:

> Knowledge institutions and networks flourish best in environments where members are free to do research, disseminate results, and share knowledge without fear of adverse political consequences. Networks also thrive when

> members do not fear that communication is monitored by external agencies and they are free to explore and exchange ideas without fear of reprisal. A repressive climate, shaped by deepening surveillance, poses a significant threat to the viability of knowledge institutions and networks (Gross Stein 2003:11,12).

She argues further that donors wanting to support knowledge networks have to help support an environment in which they can flourish: where freedoms of research, publishing and speaking about results exist, and where researchers are free from harassment.

5.2.4 Conclusion

A network's sustainability can hinge on its ability to cultivate constructive relations with external stakeholders. Its credibility can be enhanced by its products and practices – ensuring high standards and ethics, and ensuring they are relevant for intended users. Members of IDRC-supported networks have noted that in order to keep their network functioning, they had to develop communication skills. This required learning to negotiate political environments, and to communicate to people beyond their own cultures and academic spheres. Networks need to be astute in understanding how their operations can (perhaps inadvertently) undermine their positive relations with sister organizations or even their home institutions. Finally, the challenges facing networks operating in violent contexts requires extra efforts by donors seeking to support knowledge creation for peace.

5.3 Ongoing Relevance

In order to be sustainable, the documents describe that a network needs to be relevant to its members and to its context. Sustainable networks have adapted their focus and approach as members change, research agendas develop and external contexts alter. This section reviews what the documents describe as ways in which networks can achieve flexibility and adaptability. It also discusses how networks have brought in new people to ensure they remain relevant, and the question of whether a network ought to implement projects in order to keep members engaged.

5.3.1 Making a Network Adaptable

A network is often characterized as a flexible, responsive programming mechanism. This section discusses how networks are, and sometimes are not, flexible and adaptable. It also notes some ways in which networks have tried to foster adaptaility: through monitoring and evaluation, broad versus narrow thematic foci, and structures that encourage flexibility.

Network Adaptability

Contrasting networks to organizations, Söderbaum states, "[networks] may be more adaptable in a turbulent, rapidly changing environment and in situations where progress is contingent upon decentralised, voluntary cooperation, communication and more informal relationships" (2001:149). As an example of adaptability, the Asian Cropping Systems Network quickly picked up newly-emerging research approaches and issues that were not covered by the mandates of existing institutions (Chater and Carangal 1996:6). Bernard's study emphasizes the adaptability of a network as a key characteristic of its strength. She contrasts networks, in which welcoming and managing change is a key strength, to institutions "where stability is more critical" (1996:27).

However, some networks have had difficulty living up to the expectation of flexibility and adaptability. As can be seen in the examples of the Technology Policy Research Network, and CamBioTec, even for those which have been able to adapt, changes have sometimes taken a long time to define and implement:

- The Technology Policy Research Network (East and Southern Africa) wanted to shift from a focus on awarding small grants to individual researchers to facilitating comparative research with increased emphasis on dissemination and policy influence. However, the culture, practices and incentives within the network worked against the desired change. During meetings, members focused on reviewing individual grant proposals and reports, rather than collaborating. Another part of the problem was that the network donors had administered small grants directly to individual awardees because currency controls made it too difficult to devolve grant administration to a Southern-based coordinator. This practice undermined the network as a space for collaboration among researchers (PCR 891012).

- CamBioTec originally intended to promote biotech innovations. However, organizers soon realized there were flaws in their assumptions about research innovations move from the laboratory to become products with large-scale dissemination and impact. CamBioTec refocused its activities to strengthening the overall environment in which innovation can flourish. The reorientation made sense, but the plan didn't have the clear strategy to guide the network's activities (PCR 000881).

  CamBioTec also struggled with changing the niche it could fulfill for its clients. Initially, the network held meetings that were designed to initiate inter-firm partnerships both between Canadian and Latin American firms, and among Latin American businesses. However, once that initial brokering phase was over, the firms communicated more directly, and the role of the network became less important. The PCR notes, "CamBioTec has been unable to define a niche for itself beyond the dissemination of general information on market opportunities and the organization of partnering meetings – and in fact most of the detailed partnering work (e.g., feasibility studies) has gone on independently of the Network" (PCR 000881). This

was disappointing, especially since the network was expected to be able to generate funds from these links with industry.

Monitoring and Evaluation within the Network

An adaptive culture and management structure, in which a network can constantly refine its goals, strategies, and internal workings, can help it be sustainable. Building monitoring and evaluation into the network can help provide spaces to assess a network's focus, systems, structures, functions and products, and plan adaptations as necessary. Most network *projects* will have evaluation plans structured into their lifecycles, but the *network itself* can also benefit from internal reflection and external critique. As an example, an evaluation of the Central Economy and Environment Program for South East Asia (CAISNET) found that members did not see much value being added by its regional network. The evaluation suggests that either the national members refine the regional network's role and restructure it or eliminate the regional network and link the national units via internet without extra regional members or a regional coordination (Paterson 1998:5).

Creech and Ramji (2004) have started developing guidelines for assessing knowledge networks. IDRC's recent meeting on knowledge networks also noted that evaluating networks requires looking at both process and results, and requires different criteria from project evaluations.

A Broad versus Narrow Thematic Focus

A tension also lies in whether a network ought to have a broad or narrow thematic focus. Some networks have very broad themes, within which members pursue their own individual or collaborative projects. The alternative would be for the network to develop its own coherent research program within which individual members contribute to the collaborative projects defined by the network. Koanda reflects on the experience of the Réseau sur les politiques industrielles (RPI) in this regard,

> Il y a certes des avantages et inconvénients. L'avantage de la première option est que l'individu travaille dans les themes qui l'intéressent où il fait un effort d'approfondissement théorique et méthodologique. L'inconvénient majeur est qu'il est plus difficile de faire un programme ayant un impact sur la société civile avec cette modalité. La deuxième formule a l'avantage que les chercheurs travaillent sur un programme coherent mais conçu par un autre. Le RPI [Reseau sur les politiques industrielles] peut bien accroître sa visibilité par cette modalité et un peu de temps, l'inconvénient est de ne pas stimuler la créativité des chercheurs qui risquent de server comme des consultant chargés de répondre à une liste de question prepares par un tiers suivant ne méthodologie decide par les concepteurs du projet. (Koanda 1996:33)

Having a broad research agenda can allow a network to adapt easily without needing to reinvent itself. CoRR noted that the flexibility which let their network be sustainable hinged on three factors: stable funding, a broad enough research agenda that allowed shifts in research foci to be "steady and harmonious", and that their interactions via newsletter and meetings encouraged members to discuss and direct the research agenda. (Fitzgibbon and Maclean in Gross Stein and Stren 2001:84)

However, leaving a theme too broad has led to a situation where members of a network had little basis for collaboration. The Agrogeology Network (East Africa) noted that "projects were to disparate, and local interests too predominant, to permit effective networking among

researchers or research institutions" (PCR 921005). The PCR suggests that the project should have started as a task group, managed by IDRC. Perhaps later a collaborative research agenda could emerge for which a network mechanism would have been more constructive.

Scaling up from national to regional networks raises issues whether to pursue broad versus narrow themes. The shift can bring more high quality researchers into the network, and produce interesting comparative research. It can increase a network's credibility and visibility. However, when policy-relevance is a goal, a regional network has to be careful to not undermine its impact by moving too far from national-level concerns. While TIPS enjoyed international prestige, it was tentative in responding to requests to expand its focus from South Africa to Southern Africa because it did not want to undermine its ability to produce timely and relevant advice to policy makers with which it enjoyed direct relations in South Africa. Expanding regionally, the organizers feared, might undermine its particular niche and undermine the sustainability of the network as it has thrived in the past (Fine et al 2001:35).

The examples from the documents would seem to suggest that having a broad thematic focus makes it easier for a network to be flexible and adaptable. However, this strength has to be balanced with ensuring there is still a tight enough thematic cohesion around which members will communicate and collaborate, and that policy influence (if a goal) is not undermined.

Structures that allow for flexibility
Creating flexible organizational structures have helped networks maintain their adaptability. For instance, the Economy and Environment Program for South East Asia (EEPSEA) makes changes to its working groups as needs arise, both dissolving groups that are no longer relevant, and forming new ones to meet new demands (Munasinghe 1996:17).

A network's ability to adapt its focus may be hindered if members are institutions as opposed to individuals. Institutions are slower to realign their priorities to conform to the network's changing mandate: "…this is an issue that all networks are struggling with. Earth Council noted that in all such collaborative arrangements, trying to align the agenda of the network with the agenda of each member organization is very difficult. Organizations talk about collaboration, but priorities are always set differently" (Creech 2002:37). This point would counterbalance the positive aspects for sustainability that institutions contribute, explained in section 5.1.4.

5.3.2 Bringing in new people

Bringing in new people has helped networks remain relevant (Engel 2004:12). Networks can be strategic about what themes and capacities it wishes to broaden or deepen, and then seek out new members or associates who will help attain those objectives (see Laurell 2000 for a critique of Equinet in this regard). Three strategies for bringing in new people are described in the documents:

Small grants programs
Small grants competitions have helped networks identify new members who would not "surface" in regular activities (PCR 004439). An evaluation of the ATPS urged the network to not just base funding allocations on the quality of the proposals. Rather, in order to try to bring in new people into the network, the evaluation suggested the ATPS should also target

awards toward new countries or sectors in which the network would like to expand (Chudnovsky and Makhubu 1996:16). However, using small grants programs as a strategy to bring new people in will only work if awardees remain part of the network. The 2000 EEPSEA evaluation found that the network had lost track of most former awardees (Bromley and Castillo 2000). This not only makes a tracer study hard to do, but it also suggests that the network did not make the most of the opportunity to recruit new members in whom it had already invested.

Another caveat in the small grants strategy is that a financial incentive may not be enough to sustain new members' involvement. If members are lured in with cash incentives, they may not remain involved after the grant is finished. In one such case, the Asian Rice Farming Systems Network found that it was successful in linking research and extension in places where it supported collaborative projects. Where there were no projects, the network was not able to make those links. However, once the projects ended, so too did the links (Chater and Carangal 1996:53). IDRC's Montevideo workshop noted that incentives for membership should come "from below"; people become part of a network because they share its cause (2003:4). Small grants can be used as a way to introduce new members to the network and allow the network to benefit from their research, but the awards won't guarantee new members.

Shifting network membership by changing people in key positions

Church (2003:32) gives the example of an advocacy network which underwent a change of personnel in the coordination office. The shift brought changes to the wider network, as people closely associated with the former staff became less active, and people linked with the new coordinators came to the fore. Some networks instituted rotational leadership in order to ensure that power systems and relations between "insiders" and "outsiders" did not become entrenched.

Inviting people who can assist the development of a network objective to participate in a network-supported project, or offering to co-fund one of their projects so that network members can take part

Two examples demonstrate this approach. The Asian Fisheries Social Science Research Network considered this idea in order to expand its capacities in doing policy research and public advocacy (Copes and Intal 1992:18). LATN commissioned outside people to write papers, and thereby brought them into the network (Fine et al 2001:39).

5.3.3 Network has Projects of its Own

A sustainable network has to remain relevant both to its context and to its membership. A question arose from the documents: can a purely information-sharing network remain relevant to its members? Or will it dissipate more quickly than networks in which members have projects, whether research, advocacy, capacity building, or otherwise, that propel their interaction? Bernard notes that networks generally are more sustainable when they both "create solidarity around a shared purpose and allow members to work together on common tasks" (1996:25). This seemed to hold true for many of the networks covered in the documents reviewed for this study.

For example, a member of GURI's coordinating unit claimed, "the network members need deadlines, output, meetings, real activity. They would not communicate the way they do if it was just a matter of information sharing" (Maclean in Gross Stein and Stren 2001:88). Similarly, EEPSEA's evaluation said, "the idea of national associations of environmental and resource economists in each major country is a good one for in-country networking. The groups working around a common theme or research problem are also mechanisms for networking but they must have a substantive reason for getting together. It is not networking for the sake of networking" (Bromley and Castillo 2000:35). Finally, according to the PCR on the African Feed Resources Network, small grants allocations became the "glue" and "fuel" for the network (PCR 900185).

In addition to members, donors need to see the network as productive. The Red Mesoamericana de Conflictos Socio-Ambientales was deemed unsustainable because the project leader spent more effort building the structure and support for the network than ensuring it produced useful research products. The PCR comments, "The recipient's approach to networking was 'build it and they will come', but did not adequately address the issue of how to populate the network with quality results over time. The support could not be sustained because few tangible results emerged from the project, either in the form of solid case studies or useable conflict management methodologies and training material. The network remained a shell animated by the project leader" (PCR 050277).

5.3.4 Conclusion

The documents reveal that on-going relevance is important for network sustainability. This is supposed to be relatively easy for networks, because of their (assumed) flexible and adaptable nature, but the documents showed that this is not necessarily so. Some networks have had difficulties adapting to changes within and without. As for strategies to nurture adaptability, some networks undertook monitoring and evaluating processes for the network itself, not merely its projects. Some have adopted a broad enough thematic focus that allows the network to shift course fairly easily, without becoming so ill-defined that collaboration dissipates or impacts become too diffuse. Networks have convened flexible task groups that come and go according to need.

Further, bringing in new people has helped networks remain relevant. Small grants, rotational or merely changing leadership, and new projects can bring new people into the network. Also, collaborative activities seem to be important to keep members engaged. The projects can create focal points for dynamic interactions, and their outputs can keep donors interested.

5.4 Financial Sustainability for Networks

When the IDRC documents reviewed for this study use the term "sustainability" in the context of networks, financial sustainability is the most common connotation. Networks are seen to be expensive, both in terms of time and money (e.g., Goldsmith 1996, Milne 1995). Although the documents did not include thorough quantitative information about network finances, they did reveal four factors that contribute to a network's financial sustainability. These factors are: long-term and flexible donor commitments, revenue generation, diversification of donor base, and minimizing operating costs. This section discusses the costs and cost-benefits of networks, plus these four factors. It also includes comments on IDRC's performance as a funder of networks.

5.4.1 The Costs and Cost-Benefits of Networks

Networks face the same costs as other research activities IDRC supports, with the addition of costs associated with its communication, collaboration, and coordination functions. These include:

- Face-to-face meetings (travel, accommodation, meeting facilities)
- Coordination costs (salaries, perhaps office space, administrative support)
- Communication equipment, services and support for members
- Translation services if multi-lingual
- Generating revenue for the network
- Administering research programs or other network activities
- Dissemination and engagement activities.

Assessing the true cost, against the full benefits, of networks was impossible to do for this review. First, many documents did not include any financial data at all. Those that did rarely had a detailed or comprehensive enough accounting on which to base much analysis. Some evaluators noted significant problems in understanding the budgets of network coordination offices and regional units (e.g., Paterson 1998, Weber et al. 1997). Second, the nature and scope of the networks reviewed in the documents varied tremendously. Some had a small number of researchers testing a macroeconomic research model (Milne 1995). Others were broad global efforts with over one thousand members. Others became quasi-institutions with a full complement of staff and infrastructure (e.g., INBAR). Meaningful comparisons across such diverse networks are impossible. Third, many networks rely on the voluntary contribution of members' time, and the in-kind support members' host institutions freely provide. These contributions, which may constitute the majority of a network's costs, are not factored in to most network budget sheets (see Lattre-Gasquet and Merlet 1996:14).

On the benefit side of the equation, it is difficult to calculate the full benefits that networks provide researchers and research systems. Networks can provide opportunities for mentoring, informal training and capacity building that could otherwise be costly to arrange. Collaborative research, peer review of proposals and reports, and collective dissemination efforts, can produce better research outcomes than would be achieved by individual projects. Although more complex to manage, it is felt that networks can tackle more complex problems and have a further reach than traditional projects (PCR 100225). Moreover, when network members join together to develop a shared research agenda, they avoid duplicating

research efforts in their individual spheres and create synergies among dispersed efforts. This saves money, and again produces higher quality results. The review of IDRC's intended results for networks (Adamo 2004), undertaken concurrently with this study, provides more reflection on these intended benefits.

IDRC has reviewed the cost-benefits of some networks in the past. A 1993 review of research networks supported by IDRC notes that "networking has proven, in most cases, to be the most effective, and cost-efficient, method of delivering support, particularly as compared to other alternatives. The CTCS [Caribbean Technology Consultancy Services] evaluation compared the cost of delivering network services with those of UNIDO, and found that CTCS costs were 50% lower. Likewise, LAAN [Latin American Aquaculture Network] evaluators costed various research alternatives and found that it was cheaper to deliver one dollar for research using a network system than to fund individual research projects" (Koala and Smutylo 1993).

IDRC PIs are devoting large sums of money to networks, and obviously believe that the benefits still outweigh costs. However, it might still be useful to follow-up on a recommendation from SUB's 2003 external review, and undertake a fuller cost-benefit analysis for this program delivery mechanism: "there are many assumptions about the costs and benefits of networks that might be better understood if they were systematically tracked and evaluated. They are a major investment for the participants and for the Centre and their value-added could probably be better measured" (Whyte and Tauli-Corpuz 2003:iii). The authors refer to costs in "real or perceived constraints on freedom of action", impinging on innovation and other intellectual costs (ibid:30), but financial aspects would also be included in this cost-benefit analysis.

5.4.2 Securing Long-Term and Flexible Donor Commitments

The most common factor toward financial sustainability for networks, as described in many documents, was the desire to have long-term and flexible funding commitments from donors. Reviews of networks encourage donors to shift their traditional approaches to program funding supporting networks. A typical funding cycle lasts two or three years. However, the documents recommend that networks require a longer-term commitment. For networks that take five years before achieving their highest productivity, they will need a commitment of at least two project cycles to reach their potential. Moreover, rather than using a blue-print approach, the documents note positive outcomes when donors let networks evolve, experiment, and adapt to their contexts (Söderbaum 2001:157, PCR 003161). As noted above, networks are characterized as being able to quickly shift focus; flexible funding can allow them to exercise that ability. Networks also need their core administrative, communication and travel costs covered, not just project funding (Jaffé 1998:10).

The documents claim that some networks need donors that are willing to support risky initiatives. Networks which try to broker agreement among diverse parties require donors with extra patience, risk-taking and openness to ambiguity. Reinicke and Deng examine trisectoral networks that "don't presume to start with a solution, but invite stakeholders to come together to develop solutions. There's no guarantee" (2000:73,74). Supporting such networks may seem hard to justify when donors are supposed to produce quick, tangible results. The authors suggest that donors can reduce the risk of investing in such networks by putting a firm time-frame on their support, after which the process will end, or will have an evaluation that will suggest next steps.

The documents included examples where IDRC has been a risk-taker and innovator in supporting networks. The Studies on Regional Integration in Eastern and Southern Africa was the first of its kind, and was able to achieve significant impact within COMESA in both the process and products of its research (PCR 928467). The Rosslyn education project, though hampered by many delays and challenges, was a remarkable attempt at bringing together South African business, unions, government, foundations, and community groups during a time when such collaborations had not been tried before (PCR 004327). In a less volatile context, but still very significant, IDRC-supported networks on the economy and environment in Vietnam helped to instill a culture of networking in a context where inter-institutional dialogue and collaboration had been very poor before (Miller 2002:26).

CoRR and ISLE are among the networks that have appreciated a long-term commitment from IDRC that allowed them to develop incrementally, with a solid base. CAISNET also appreciated a hands-off approach by IDRC which let them focus on developing their network functions and services. Contrasting CAISNET's experience with IDRC, when the network took on a CIDA-funded grant, it had to more than quadruple the number of person-hours devoted to administering and reporting on funds. Moreover, CAISNET members claimed that meeting the CIDA requirements led to significant shifts in the character of the network (Paterson 1998:8,49).

On the other hand, GURI members were less satisfied with IDRC's funding. GURI had long-term, stable, hands-off and flexible funding from the Ford Foundation from its inception and through three phases. IDRC funded specific projects during Phase II of the network. Maclean explains the situation in her review:

> IDRC made CAD $100,000 available to each of the three regions in Phase 2… for research on urban issues and the environment. However, these funds were to go directly to the regions, bypassing the Toronto coordinating structure. The African and Latin American regions produced research proposals which were approved by IDRC, but the Asian proposal was turned down, and the Asian coordinator decided that the level of funding on offer was not equal to the effort required to revise the proposal – a feeling shared to some extent in the other regions. In the end, the IDRC research occurred largely outside the GURI framework. From the perspective of the coordinators in Toronto, the terms of … the IDRC funding did not sufficiently respect the logic of the network and ran the risk of fragmenting the evolving structure (Maclean in Gross Stein and Stren 2001:97).

Some documents note that it is not easy for donors to make long-term flexible commitments in a results-oriented world. Donors may be tempted to take an even more hard-line approach with networks because of the risks involved. "Precisely because networks tend to be more flexible and more fluid in their organization, funders tend to impose more, rather than less, stringent requirements even as they seek to support the flexibility that knowledge networks can bring" (Stren in Gross Stein and Stren 2001:142).

5.4.3 Diversifying the Network Donor-Base

After comments about long-term funding, the second most common strategy suggested in the documents for financial sustainability is to find more donors. Networks have diversified

their donor base in order to be less vulnerable to shifts in funding priorities or levels within a primary donor organization. Donors also provide other in-kind supports and opportunities, which also contribute toward sustainability. For instance, IDRC has provided access to library and information systems, opportunities to host or participate in donor meetings, international expertise, advice and support on research activities, and publishing venues.

Diversification of funding sources is described as critical for some networks in politically-sensitive contexts. For instance, consensus-building tri-sectoral networks gain credibility that contributes to sustainability when they get funding from a broad range of stakeholder groups: foundations, governments, and business. Diversified funding demonstrates the network will not be unduly influenced by one donor or group (Reinicke and Deng 2000:72).

Networks have sought funding from donor agencies like IDRC, but also from national governments and private sector actors. Securing funding from national governments can contribute to sustainability in that it devolves some financial responsibility (and perhaps ownership) to a body that is more likely to be a user of the research. Finding private sector funding has be an option for networks that relate to technologies, applications, education, or causes related to businesses' interests. The Rosslyn project in South Africa received some initial contributions from private businesses that believed the training project being planned would be useful for them (PCR 004327). In another case, some Canadian Centres of Excellence aim to be fully self-financed, partly by private sector funds and the commercialization of research results (Clark 1998:18). However, many of the networks that IDRC supports will have a harder time getting private sector funding. Public policy research networks, for instance, produce public goods that industry is unlikely to pay for. Such networks may have some success in getting industry to pay for memberships if the network can provide access to an "exclusive club" of policy makers and leading researchers (Yeo 2004:17). As with all funding opportunities, networks are conscious of the implications of accepting money from sources that could undermine their independence or intellectual freedom.

When attempting to diversify a donor base, both the coordinators and members of a network can benefit from marketing and sales techniques. Some of the techniques that arose in the literature include:

- *Being able to concisely explain the network's program.* OLISTICA was criticized for not being able to clearly explain its program in language that potential donors could understand. It was too complex, too academic. Ironically, it was also criticized as trying to be too catchy, using word plays between English and Spanish terms to name its products and concepts (PCR 100584).

- *Budgeting for network overheads within project proposals.* Creech and Willard note as members seek funding for research activities, they should always include network overhead costs within their proposals, and be able to explain how that overhead is useful for the project (2001:78). Fine and Stryker noted that the 10% administration overhead that IDRC allows in its grants is "totally unrealistic"; 20-25% would is necessary to cover a network like TIPS' real costs (2001:40).

- *Dividing network activities into manageable chunks that donors can take on.* The divisions could be levels of activity (e.g., local projects, national meetings, regional facilitation), thematic areas, country programs, or funding "windows". INBAR succeed in reducing its 18 program categories into four broad areas, and was able to

secure a major donor for each one (PCR 100195). TIPS offers donors three funding windows: general untied support, funding specific network activities like a meeting or training event, and short-term consultancies (Fine and Stryker 2001:40).

- *Bring donors and potential donors into the network structure.* As an example, the network on Studies on Regional Integration in East and Southern Africa network thought that the European Union (EU) might be a potential funder, given its obvious interest in regional integration issues. The network invited a staff person from the EU to be an associate member of the Project Management Committee. Out of this relationship, the EU agreed to fund Phase II (PCR 928467). Networks like the EEPSEA and AERC have donors in a "sponsors group" or on their boards, and charge them with further fundraising. These networks are careful to avoid conflicts of interest or letting donors sway the research agenda; they have separate bodies to oversee proposal adjudication and academic programs.

There are again tensions and balances related to diversifying a network's donor base. Donor funding and reporting requirements can add significant amounts of work for the network. It can also affect dynamics within the network. Partnering with additional donors requires more reporting, more coordination, and meeting more interests. Bernard argues that with multiple donors, networks "inevitably become less flexible, with… less peer review, member-based management, formative evaluation and qualitative measures…" (1996:35,36). Rathgeber quotes Jeffrey Fine who warns that multiple donors can undermine a network's key strength of accommodating diverse and conflicting interests, leading to "the enfeeblement of [a network's] vitality" (in Rathgeber 2001:42).

5.4.4 Revenue Generation

Networks have generated revenue through the commercialization of research results, selling services, member contributions, and taking on research consultancies. Some examples in the documents include:

- CAISNET national units generated a limited amount of revenue by selling services to private businesses. Some increased their income by taking on donor projects or broadening the range of services they offer in order to generate more revenue (Paterson 1998:5,9).

- PRODAR has taken on consulting contracts with international agencies (Weber et al 1997:11).

- Beyond requiring in-kind support to network activities, some networks require membership fees or contributions. INBAR hoped to get 3-5% of its income from signatory nations (PCR 100195). National units in CAISNET get money from their national sponsoring organizations to support office and staff costs (Paterson 1998:10). However, Creech and Willard warn that the process of collecting dues can itself be costly and time-consuming, and many not-for-profit members wouldn't have a lot of money to contribute regularly (2001:78).

- Rugmark, the product of a multi-sectoral process, is a label certifying that a rug has not been made by child labour. European and American importers of Rugmark rugs pay 1% of the value of the rugs to the certification body. The money is used to support children's education and other programs designed to ensure children do not get pressured back into employment (Reinicke and Deng 2000:73).

Revenue generation does not always work out, however. As explained above, CamBioTec, for example, had hoped to generate funds by brokering inter-firm partnerships. It was successful in initiating relationships that turned into eight inter-firm agreements. However, it soon found that firms were pursuing partnerships outside of the network, and CamBioTec no longer had a niche to fill, nor to profit from (PCR 000881). Similarly, GREEN hoped to generate income by acting as a facilitator between communities and the water authority in South Africa. However, this plan did not work out. Instead, the network relied completely on IDRC funding (PCR 100145).

According to the documents reviewed, few networks seem to have had a lot of success in this kind of revenue generation. These strategies may be a way of generating small amounts of money to complement donor funding. Authors also warn against getting diverted from a network's original purpose when taking on consulting contracts (Söderbaum 2001:155,156; Yeo 2004).

Moreover, certain kinds of networks do not produce money-making research products or services. Policy research, for example, is a kind of public good that few would be willing to pay for (Creech and Willard 2001:78). Even in cases where governments do fund public policy research, networks will face the challenge of how to maintain critical stances toward this "client". Yeo notes that as donors' ODA policies move toward Sector Wide Approaches and direct funding to government budgets, there may be an increased problem in governments being the sole client for public policy research in developing countries. Although these ODA policies may have positive results in ensuring local ownership of the

research agenda, they may result in a monopsony situation in which governments are the only client for public policy research. Research institutes and networks will no longer receive direct support from bilateral or multilateral agencies. This could ultimately undermine the independence and viability of research networks and institutions (2004:19).

5.4.5 Minimizing Operation Costs

Networks have aimed to minimize their costs. Some strategies noted in the documents include:

- ***avoiding paying international levels for salaries and offices***. Goldsmith noted that networks can avoid paying high internal-level wages for their coordinators or setting up luxurious coordination offices that will be hard to maintain at the end of donor funding (1996:18,19). On the other hand, paying competitive salaries will affect a network's ability to hire a qualified candidate. English concluded that "one should hire the strongest coordinator possible and be prepared to pay the (competitive) price… However, the salary level can be reduced somewhat by offering as much autonomy as possible in a supportive governance structure" (1995:4,5).

- ***enlisting volunteer labour by members.*** Having volunteer labour for coordination, communication support, etc., worked where the volunteers already have their living expenses covered by other means, when the work is not too onerous, and when the cause is sufficiently compelling to encourage members to voluntarily contribute their time and work (Maclean in Gross Stein and Stren 2001, Mougeot 1995).

  Having members undertake most network activities can keep the costs of the central coordinating unit lower. As Church points out,

  > Costs start to rise when the 'secretariat' or institutionalized function becomes synonymous with the network, and the secretariat begins to become more and more 'operational', doing more of the work itself. This is where traditional core costs start to take on greater prominence, more staff and equipment are needed. There are networks which are minimally institutionalized, to allow for maximum commitment and participation by members at minimum cost. This works well, and it needs long-term basic core funding. (Church et al 2003:39)

- ***avoiding providing funds for research.*** Networks need not be a funding source for members. While in the case of the Macroeconomic Research Network, members found themselves without enough core research funding to have findings to disseminate via the network (PCR 002879), in other situations, researchers were able to find outside resources to support their work for the network. Parzival and Ponciano suggested that the Asian Fisheries Social Science Research Network could have an "asymmetrical" approach to funding member activities: mature members should find their own research money, but the network would still provide research and capacity building support for less mature members (1992:2,27).

- ***averaging fixed costs over an increased number of members.*** In some cases, having a larger membership did not entail significant increases in overhead costs for network coordination. For instance, the Centre de recherche en économie et finance

appliquées (CREFA) noted that enlarging its membership would help spread out the costs of their publications:

> … nous regrettons que l'ensemble de nos interventions ne bénéficie pas à un bassin beaucoup plus large de chercheurs. En effet, nos activités contiennent une très forte proportion de coûts fixes (préparation de recueils, guides, fiches, manuels, logiciels, etc.). Une augmentation du nombre de chercheurs dans le Réseau ferait sûrement diminuer de manière significative les coûts par chercheur tant sur le plan de l'appui scientifique que sure le plan de l'administration du Réseau. (Cockburn 1996:13)

In general, costs are higher at the beginning of a network's life, as members need opportunities to meet each other, establish initial understandings, define agendas and approaches to the activities they will pursue. Here, funding is an investment. The network may not yet be producing its best results, so the funding may seem to be yielding only low returns. However, some networks' were able to reduce their staff and administration cost ratios significantly even within the first five years. EEPSEA's ratio of staff and administrative costs to total budget went down from 38% to 27% in four years, primarily because the scope of their activities grew, and initial coordination needs eased off (Munasinghe 1996:A3.3).

However, cost savings will not erase a network's need for financing, and certain kinds of network activities may never become self-sufficient. Moreover, the kinds of networks that IDRC is involved in generally require some form of coordination function which will have costs that must be paid for by an outside agency. So while minimizing operating costs is an important factor toward financial sustainability, the documents suggest it will have to be complemented with attempts to address the other three factors.

5.4.6 Conclusion

Donor funding seems to be required for networks, particularly in their initial phases. An IDRC study in 1993 indicates that networks are cost-effective, given their results, but given the pervasiveness of network activities within IDRC, it may be helpful to undertake another analysis in the current context. The documents reveal four factors in financial sustainability for networks. The first is securing long-term donor commitments. Second, networks have tried to diversify their donor base, including linking to national government and private sector money. Third, some networks have had success in revenue-generation activities, but many have become wary of the drawbacks and limitations of this factor. Finally, networks have addressed the need to decrease their costs as much as possible. This section also reported on some of the document's comments about IDRC's performance in funding networks, which has often, though not always, been described as supportive, patient, without undue administrative burdens, and willing to take risks.

5.5 Housing a Network

The final part of this section on factors affecting the sustainability of networks deals with finding an institutional home for a network. Within an institutional home, networks can

secure funding more easily, since they become more a recognizable entity than a loose set of relations among researchers and other stakeholders (Conseil Equilibrio 1999). An institution willing to take on responsibilities for housing a network may also contribute to its budget, its visibility, its credibility, and provide it access to expertise, administrative and information services. This section will look at three strategies that have helped networks achieve more sustainability within an institutional home. First, IDRC has devolved networks from being housed in its offices or from Canadian hosts to Southern institutions. Second, the Centre has helped other networks incorporate as independent legal identities. Finally, some Centre-supported networks have tried to "piggy-back" some of their themes, activities, or products on existing institutions.

5.5.1 Devolving to Southern Institutions

IDRC has used the strategy of incubating networks within its offices, or within Canadian universities, and then trying to devolve them to Southern governments or institutions at a later stage. Devolution has both normative and practical value. Devolution demonstrates values of Southern empowerment, and building Southern research systems. Practically, devolution can help ensure the network remains relevant, for locally-based organizations are now leading all the network's priorities and activities. Bernard described this strategy as follows:

> Where possible, housing network coordination in one of the member institutions is seen as preferable, under certain conditions. For example, that the network agenda is mutually agreed among all members; that the host institution as a whole is implicated in the activity and …*feels the job is important for its (own) work* (Oil Seeds Network/East Africa); and that adequate support is given for professional support and membership co-ordination (resources donors and hosts often underestimate in network planning). It is also important that housing the network results in broader institutional gains for the host; that it is not being overwhelmed by adding yet another project activity, but is realizing effective synergies from it. (1996:35)

The MIMAP (Micro Impacts of Macroeconomic and Adjustment Policies) PI has begun to move the coordination of its Poverty and Economic Policy (PEP) networks from Canadian universities to bases in Asian or African institutions. MIMAP intends to improve the networks' reach and coverage through this devolution. An external evaluation of the PI, however, warns that the transfer will require careful planning:

> A major and senior MIMAP effort will have to be mounted to identify new 'receiving' institutions, bolster and support their credibility and capacity, orchestrate the transfer of management responsibility from Laval University, and ensure continued access to the rich accumulated expertise lodged in both Laval and the University of Western Ontario. Absent such support, there is the likelihood either that the transfer will in fact not take place, or that it will prove a partial or even total failure. In either case the effectiveness and survival of the various networks and of the PEP ones in particular could be compromised. Also, while cross-fertilization across developing countries scholars is essential, the devolution should take into account the required background knowledge of the broader environment. On that point, identifying an African or Asian institution with enough knowledge of the other regions could prove a challenge. (Habito et al. 2004:29)

Moreover, the MIMAP review counsels that devolving network management to Southern institutions will require a careful reordering of relations between IDRC and the network hosts: "As the devolved institutions start to really get hold of the networks and to gain in autonomy and self-reliance, the role of MIMAP project officers will have to undergo a delicate redefinition, impacting on the nature of their relationships with the managers and members of the devolved networks, and indeed on the relationships between MIMAP as a whole and its networks" (ibid: 30).

IDRC has had experience in developing institutional homes for networks. For example, IDRC ran a project on financial sector reform with five country case studies. Each study was administered with a separate Memorandum of Grand Conditions (MGC) between IDRC and the partner institution. In a subsequent phase, IDRC supported members of the previous project, plus some others, to form a network on Finance and Changing Trade Patterns. Part of the intention of the second phase was to devolve the management of the network to the Centre for Studies on State and Society (CEDES) in Argentina. The Centre helped build CEDES' capacity to manage this international network, and the PCR notes the devolution was successful (PCR 003252).

5.5.2 Incorporating as a Separate Legal Entity

In some instances, IDRC has helped a network become an independent legal entity. This strategy can be helpful when a network needs to rationalize and coordinate multiple donors and multiple activities, or when no single existing institution could provide it an adequate home. Saminathan and Cuthbertson (1996:13) argued it was urgent that INBAR become a separately incorporated legal entity during its second phase. By that time, INBAR was administering multiple projects, capacity building initiatives, information services, and coordinating among several donors in over ten countries. In another example, PRODAR functioned well as a 'movement' for a while, with flexible, interactive leadership responding to a rapidly changing environment. However, after six years, the network decided that becoming a formally incorporated structure might help it integrate its programming, govern itself more effectively, and better coordinate among its donors (Weber et al. 1997:60). IDRC has successfully launched several other independently incorporated networks, including the AERC and SchoolNet Africa.

5.5.3 Transferring Activities to Other Institutions

Finally, IDRC-supported networks have attempted to transfer some of their themes, activities, or products to other programs or institutions in order to ensure these things will continue beyond the network. RUAF tried to integrate itself into long-term structures like the UN programs for City Alliances (Whyte and Tauli-Corpuz 2003:26). CISEPO, with its relatively small core funding, tries to "piggy-back" its activities on other grants wherever possible (Gross Stein and Stren 2001:31). MIMAP has devolved financial and institutional responsibility for its country network research projects largely to national governments, so the PI can step up to supporting regional and thematic networks (Habito et al. 2004:13).

5.5.4 Conclusion

Some networks flourish as loose, informal, decentralized, non-institutionalized sets of relations for a long time. However, finding an institutional home has been a factor that assisted in the sustainability for some networks wishing to become more visible, take advantage of the services and expertise of a host institution, and garner resources in their own names. As the section above indicates, it may not be necessary to incorporate the entire network within another institution or as a separate legal organization. Networks have found creative ways to institutionalize only certain products or aspects of their work and relationships as needed.

6. When a Network is Planned to Have a Limited Lifespan, What Factors Facilitate Productive Functioning and Satisfactory Wrapping-up / Completion of the Network?

Unfortunately, this document review cannot provide a complete answer to this important question. The documents do not comment whether and how network function differently when they have a limited versus an open-ended timeframe. There is also almost no information about how networks bring their activities to completion. As IDRC-supported networks mature, and as newly created ones might try to be more explicit about how long they intend to operate, it would be valuable to draw together more experience and ideas on how to bring a network to a constructive conclusion. The interviews and surveys in the remaining parts of this evaluation effort could pursue these questions.

In the documents reviewed, the clearest examples of time-limited networks are the multi-stakeholder processes described by Reinicke and Deng (2000) and Stratos (2002). These processes guaranteed fixed time-lines for participants in order to assure them (and their donors) that they would not get mired in an endless unproductive process trying to find consensus among divergent interests. Strict deadlines also helped members work efficiently.

Perhaps because of the indeterminacy of IDRC's approach to setting time-lines for networks, a couple of important networks dissolved after three or four phases. The Macroeconomic Research Network (Latin America) dissipated with members drifting off and simply not fulfilling commitments. The Educational Research Network for Eastern and Southern Africa (ERNESA) fell apart in its third phase when the coordinating unit was transferred from one institution to another, and members no longer had confidence in its direction. IDRC's CFP PI also caused fears within the AGUILA network, when it decided to phase out of supporting work in Latin America. Members of the network felt "abandoned" by what they perceived as "draconian" actions by the Centre. However, CFP improved the situation by providing some fundraising training to the network, to help it find other ways to advance its work (Whyte and Drescher 2003:9).

As seen in Sections 3 and 4, IDRC's grey literature emphasizes that networks need not exist in perpetuity. Moreover, documents also state that it would be helpful for the Centre to be clear about its own intentions for the length and nature of its own involvement in specific networks. Understanding issues around limited lifespans for networks, and how to help networks to conclusions could therefore be important for the Centre's practice in supporting networks. I Further research might ask:

- What indicators can networks track to monitor whether their internal relationships and external context warrant continuing into another phase versus bringing the network to closure?
- If a network is going to wrap up its activities, how can it achieve closure that honours the relationships members have developed, moves results forward, and helps ensure important pieces of the remaining research agenda continue?
- How can the Centre best intervene if a network starts to fall apart due to a changing context, internal disintegration within the membership, or the end of resources?
- What networks benefit most from set time-lines, and which flourish with an open-ended, iterative development? Do advocacy networks, for instance, still function best with set time-frames (Evaluation Unit 1996)?

7. Conclusion: Sustainability for Networks

This document review forms part of the first step of a three-phase strategic evaluation of IDRC experience in supporting networks. The review uses IDRC evaluation reports, short-form PCRs, IDRC grey literature and selected outside documents to examine four questions about sustainability for networks. The four questions posed in this document review are not necessarily ones that those documents intended to answer. Therefore, the answers offered in this report were formed by partial, sometimes contradictory, and often only implicit information. The report maintains an implementation-focus, drawing out experiences, ideas, and strategies that IDRC staff might apply to the networks with which they are involved. This conclusion summarizes the main findings for each of the questions posed in the review.

Question 1: What does IDRC mean by sustainability of networks?

The review found that no document provided a definition of sustainability for networks. In fact, because of the very broad definition of the term "network" used in this review, it would be difficult to offer a single, useful definition. Rather, the documents show that when IDRC discusses sustainability for networks, it refers various to four dimensions: time, finances, relationships and processes and structures.

Within the ***dimension of time***, the review found that the lifespan of IDRC-supported networks varies from two years to over two decades. The variation depends partly on the purposes of the network. All capacity building networks tend to have longer time frames. Lifespans of networks that focus on improving research quality or the utilization of research results vary from two or three years, to much longer. Finally, within the dimension of time, the documents show that IDRC acknowledges that for some networks to be sustainable, they must emerge incrementally.

Regarding ***financial dimensions*** of sustainability, the documents showed that IDRC does not believe a network has to be financially self-sufficient. Documents showed that some networks have had some success in revenue generation, but others rely more on diversifying their funding sources.

Since IDRC's concept of networks begins with them as social arrangements, the Centre emphasizes ***relational dimensions*** of sustainability. However, the documents also show that

to IDRC, sustainable networks do not necessarily have a static membership. Within some networks, sustainability includes a dynamic movement of members through the network.

With respect to ***processes and structural dimensions*** of sustainability, the documents showed that IDRC is willing to allow networks to take time to become sustainable even over the priority of producing immediate research results. Sustainable networks demonstrate flexibility in adapting to internal and external change. Moreover, the Centre believes that some formal sustainable networks have benefited from having an independent status or a stable institutional home. Finally, in some cases, IDRC has supported capacity building efforts both for members to participate within networks, as for institutions to house and manage them.

Question 2: When is sustainability a goal for networks, and when isn't it a goal?

When individual networks are reviewed in PCRs, Evaluation reports or PI external reviews, explicit or implicit comments suggest that they are supposed to continue at least into another phase of activity and/or IDRC support. The exact anticipated time-frame is not stated. However, IDRC's grey literature on networks repeatedly points out that networks need not exist in perpetuity. The word "sustainability" connotes a certain moral quality in development circles, stemming from its use in the term "sustainable development". However, networks are merely a program delivery mechanism, not a development impact. The grey literature states that the Centre ought to be clear about how long it intends to remain involved in a network. The contrast between the two sets of literature raises a question of whether there is a gap between theory and practice in IDRC's experience with networks. The Centre could be more explicit about the time and resources it is willing to commit in different networks, and encourage members to do the same.

Question 3: What factors contribute to the sustainability of networks?

Five areas of factors emerged in the documents: internal relations, external externals and contextual factors, on-going relevance, financial aspects, and housing a network.

Within **internal relations**, the key factors include the development of shared ownership and mutual trust, the dynamism of connections and interactions among members, and balancing the pros and cons between having "open" or "closed / selective" approaches to membership.

On the question of having individuals or institutions as members, institutions bring strengths that could support a network's sustainability. However, given that it can be more difficult to manage institutional as opposed to individual collaboration within networks, some networks have tried to find some middle ground between institutional and individual memberships.

Rather than insisting on a strict understanding of equality of relations, encouraging a network to define "circles of participation" through which members can choose at which level they'd like to participate, can also make their participation more sustainable. The discussion of equality versus circles of participation raises, but does not answer, the issue of how to manage power relations within networks.

External relations and contextual factors include a network's perceived credibility by external stakeholders, its ability to engage and communicate with stakeholders and its target audiences, and special considerations that affect sustainability for networks that operate in violent contexts.

For a network to be sustainable, it must continue to be relevant to its members and to its context. This requires a network to be adaptable. Although some authors describe networks as inherently adaptable and flexible, examples in the documents show that some networks had difficulties changing focus, processes or membership. Strategies for developing flexibility include using evaluation processes, having a fairly broad thematic focus, and building structures that allow for flexibility. Moreover, bringing in new members can help a network remain relevant. In order to do so, networks have used small grants programs or new research projects, while others noted that changing people in key positions was a way of bringing new people in. Evidence from the documents suggest that networks which undertake and facilitate collaborative projects are more likely to remain immediate and relevant to their members, and therefore more sustainable, than networks that only share information.

Financial factors are crucial for network sustainability. Given the inconsistent and unclear budget information in the documents, it was very difficult to judge how much networks actually cost. Assessing the financial benefits of networks is even more difficult because they include intangibles, like less duplication and higher quality research. Thus, it was not possible to determine whether networks are in fact expensive, given what they can achieve.

Four factors of financial sustainability emerged in the documents. First, networks benefit from having secure, long-term and flexible donor commitments. Second, networks ought to diversify their donor base beyond a single donor. Third, networks can try to generate some revenue through commercialization of research results, selling services, taking on consultancies, and selling memberships. However, the documents point out a number of problems that have arisen from each of these strategies, and few networks have recouped significant portions of their costs through revenue generation efforts. Finally, networks can minimize their operating costs by avoiding high-level salary and office expectations, enlisting volunteer labour, having members seek out their own funding for network activities, and averaging fixed costs over larger memberships.

The final factor affecting sustainability is that of finding **institutional homes for networks**. IDRC has incubated several networks in its regional offices, or under the coordination of Canadian universities or research institutes. Devolving them to Southern institutions is consistent with empowerment values, and also has implications for sustainability. Devolving a network to a Southern host institution or government office may ensure that it remains relevant to its context, may ensure that its new host contributes financially, and may keep it in closer touch with its members. Incorporating as a legal entity can help networks become more visible, have an easier time securing funding in its own name, and help consolidate a previously scattered set of activities and functions. Some networks try to devolve key activities, products or research agendas to secure institutions as a way of ensuring those priorities are sustained beyond the life of the network.

IDRC's performance as a supporter of networks is mixed. Some of the documents provide examples where the Centre acted as a supportive and patient donor, avoiding undue administrative burdens, and willing to take risks. In one case, a network complained that the Centre's approach to funding only parts of a network risked fragmenting its structure. Some PCRs noted that staff turnover inhibited proper support and follow-up. In terms of finding institutional homes, IDRC has had success in devolving networks to Southern institutions, and helping others gain independent legal status.

Question 4: When a network is planned to have a limited lifespan, what factors facilitate production functioning and satisfactory wrapping up / completion of the network?

The final question asked in this review remains largely unanswered. There was little information in the documents on whether networks function differently if they have a limited lifespan. As well, IDRC has documented very little experience with networks that wrapped up in a formal and constructive way. Rather, some networks that came to an end saw more of a dissolution than a conclusion. Questions about how to work with limited lifespans, and how to help a network come to a completion point remain for the next phases of this network evaluation. Further research might explore what kinds of networks function best with limited as opposed to open-ended time-frames, what indicators suggest a network ought to continue into another phase versus phasing out its activities, how to intervene in failing networks, and how to achieve constructive closure for networks.

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Appendix B: Acronyms

AERC	African Economic Research Consortium
AGUILA	Agricultura Urbana Investigaciones Latino Americana
ARFSN	Asian Rice Farming Systems Network
AFSSRN	Asian Fisheries Social Science Research Network
ASPR	Assessment of Social Policy Reforms
ATPS	African Technology Policy Studies
CAISNET	Central America Industrial Support Network
CBDC	Community Biodiversity Development and Conservation
CCKN	Climate Change Knowledge Network
CEDES	Centre for Studies on State and Society
CFP	Cities Feeding People
CISEPO	Canadian International Scientific Exchange Program
COMESA	Common Market of Eastern and Southern Africa
CoRR	Coastal Resources Research
EATPS	Eastern and Southern African Technology Policy Studies
EEPSEA	Economy and Environment Program for South East Asia
EMEC	Effective Management of Multilingual Electronic Conferences
ERNESA	Educational Research Network for Eastern and Southern Africa
EU	European Union
GURI	Global Urban Research Initiative
ICT	Information and Communication Technology
IDRC	International Development Research Centre
IDRIS	IDRC Development Research Information System
IFRTD	International Forum for Rural Transport and Development
ILCA	International Livestock Center for Africa
IMFNS	International Model Forest Network Secretariat
INBAR	International Network for Bamboo and Rattan
ISLE	Island Sustainability, Livelihood and Equity
LACEA	Latin American and Caribbean Economics Association
LATN	Latin America Trade Network
MIMAP	Micro Impacts of Macroeconomic and Adjustment Policies
MGC	Memorandum of Grant Conditions
NWG	Network Working Group
PCR	Project Completion Report
PEP	Poverty and Economic Policy
PI	Program Initiative
PRODAR	Programa Cooperativo para el Desarrollo de la Agroindustria Rural
RDIMSEA	Regional Development and Indigenous Minorities in Southeast Asia
RUAF	Resource Centre on Urban Agriculture and Forestry
SDCN	Sustainable Development Communications Network
SGP	Small Grants Programs
SISERA	Secretariat for Institutional Support for Economic Research in Africa
SUB	Sustainable Use of Biodiversity
TEC	Trade, Employment and Competitiveness
TIPS	Trade and Industrial Policy Secretariat
TKN	Trade Knowledge Network
UPP	University Partnerships in Essential Health Research
VEEM	Vietnamese Economic and Environmental Management Program

VERN	Vietnamese Economic Research Network
VISED	Vietnam Sustainable Economic Development Project
WATPS	West African Technology Policy Studies